SEPTEMBER '56

# MODERN TEXTILES

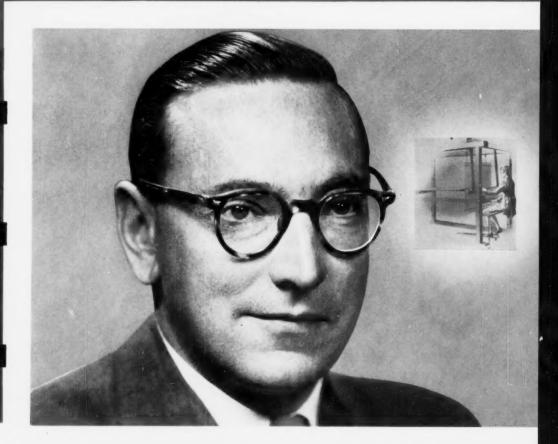
MAGAZINE

Specializing in Rayon and Synthetic Fibers since 1925

FIBERS

FABRICS

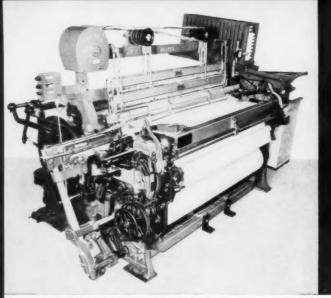
FINISHES



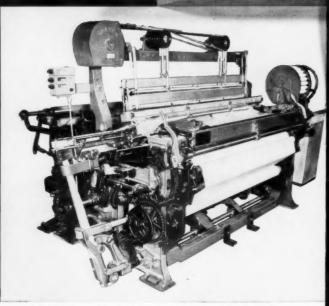
England's
CHARLES L.
PAINE directs
Courtauld's return
engagement—
story page 31

THIS MONTH'S SPECIAL FEATURES

Annual man-made fiber review
New denier and filament tables
Preview of next month's textile show
Heatsetting nylon for carpet textures
How to dye wool-Acrilan blends
AND 14 MORE EXCLUSIVE REPORTS AND HELPFUL ARTICLES

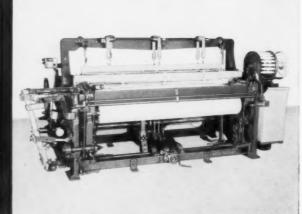


50" X-2 weaving spun rayon blends, featuring new Filling Magazine.

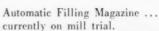


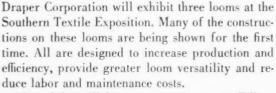
50" X-2 weaving filament yarns equipped with conventional Rotary Battery and new double-roll Take-Up.

# DRAPER TO EXHIBIT NEW RESEARCH AND ENGINEERING DEVELOPMENTS AT GREENVILLE



 $82^{\prime\prime}$  XP-2 wide sheeting loom incorporating all of the latest improvements.





The exhibit will feature a new Automatic Filling Magazine (which eliminates the conventional type battery); a Pneumatic Thread Clearing device; a new Take-Up mechanism; new and improved Parallel Motions; and other assemblies which contribute to better loom performance. For the latest in weaving aids, see the Draper exhibit at the Southern Textile Exposition; booths #134-#135-#136.



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See our display of machines in operation at the Greenville Show

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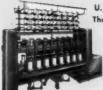
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# MODERN EXTILES MAGAZINE Vol. 37, No. 9

#### Modern Textiles Magazine Established 1925

Published Monthly by Rayon Publishing Corporation 303 Fifth Ave., New York 16, N. Y. MUrray Hill 4-0455

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Rayon and Acetate Fibers Producers Group ......Empire State Bldg., New York American Association of Textile Chemists and Colorists Lowell Techn. Inst., Lowell, Mass. American Association for Textile Technology, Inc......100 W. 55th St., New York Silk and Rayon Printers and Dyers Ass'n of America, Inc......1450 Broadway, New York Synthetic Organic Chemical Manufacturers
Association 41 E. 42nd St., New York American Rayon Institute 350 Fifth Avenue, New York

#### Departments

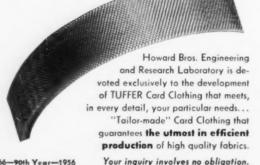
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#### **New Nylon Monofilaments**

Nylon produced by the Du Pont Co. is now available in a wide range of heavy denier monofilament of textile standards. Yarns manufactured to the new specifications are packaged on aluminum spools carrying approximately 1.7 pounds. Deniers commercially available are 100, 200, 380, 450, and 600, in semidull luster. The 100- and 200-denier monofilament are also available in bright luster.

Properties of the heavy denier yarns are generally comparable to those of multifilament and lighter denier monofilament nylon yarns, with the added quality of greater stiffness resulting from the larger cross section. Greater stiffness has made these yarns important in such apparel applications as bouffant skirts. Additional applications include specialized filtration media and chafer fabrics for tires. In development are mesh shoe fabrics, upholstery uses, and garment interliners.

#### Nylon Rope 41/2 Miles Long Anchors Ship

Last month the research ship Calypso was anchored in the deepest part of the Atlantic Ocean by a nylon rope more than 4½ miles, or 24,600 feet, long. The rope, which held the 142-foot former U. S. mine sweeper steady, was less than half an inch in diameter.

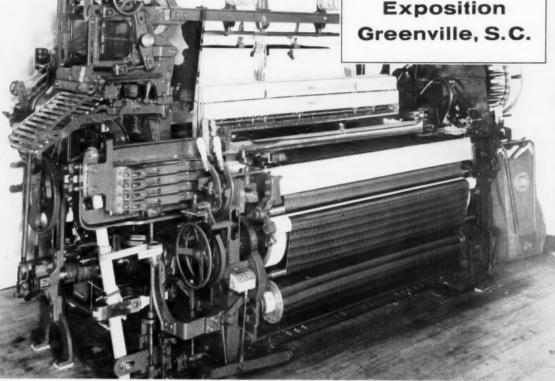
The Calypso, commanded by the famous French underwater explorer Captain Jacques-Yves Cousteau, is attempting to learn more about the Romanche Trench, one of the deepest parts of the Atlantic midway between the African and South American continents. Using even a smaller nylon rope, the expedition lowered cameras and lighting equipment to the bottom of the trench.



# See C&K at

# Booth 141

Southern Textile Exposition



#### Newest M-P Looms running on Cotton Dress Goods

Latest developments in C&K's Multi-Purpose Loom design will be in operation at the Greenville Show. One will be the M-P Automatic Bobbin-Changing Dobby Cotton Dress Goods Loom shown above. This loom is 56" between swords, 20 harness (15 32" gauge), 4 x 1 box.

The other M-P Loom on exhibition will be an Automatic Bobbin-Changing Dobby Convertible type . 56" between swords, 20 harness (15/32" gauge). This

loom is convertible from 1 x 1 to 2 x 1, vice versa. Come into Booth 141 and see for yourself the Multiple-Profit opportunities in C&K's Multi-Purpose design

. . . the only loom design that enables you to convert overnight from plain to fancy fabrics and back again, at the changing whims of the market. See for yourself that this is the Most Protection you can get for the competitive future of your mill.

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#### **Disposable Garments**



Paper garments are here. The coveralls and skirts in this picture are made of a new paper material produced by Kimberly-Clark Corp. Called Fabric K-2000, one form of the fabric is made with a web of cross-laid fibers held together by an adhesive as a "base". Fiber used may be rayon, nylon or glass. To each side of this web several plies of high wet-

strength cellulose wadding are laminated to form a "skin" or surface. The material can be printed in patterns or solid colors. It cuts like paper and can be sewed on a sewing machine like cloth. Zippers and fasteners can be attached. Other end uses: lab coats; rain capes; protective uniforms for workers exposed to radiation.

#### Chitin for Textile and Other Uses Now Produced Commercially

At a new plant in Brunswick, Ga., commercial production has been started for deacetylated chitin under the tradename, "Kylan". The product has wide industry applications in textiles, paper manufacturing, cosmetics and pharmaceuticals. A recent patent licensed to Moretex Chemical Products, Inc., covers use of Kylan for shrink-resisting wool and wool containing fabrics. The plant at Brunswick is operated by the Kylan Corp., Spartanburg, S. C.

According to Paul C. Thomas, president of the company, applications of Kylan to several typical woolen and worsted fabrics on a commercial scale have shown that with a deposition of about 3% solids of Kylan on the fabric, shrinkage is reduced from 40% to less than 5% during a series of 12 wash

cycles in commercial laundering.

Chitin, the raw material from which deacetylated chitin is produced, exists in various forms in crustacea such as crabs, lobsters, shrimp and crayfish, in which it forms the horny exoskeleton of the animal. It is also found in grasshoppers, various forms of fungi and hard-shell beetles. The product manufactured by Kylan Corp. is isolated from chitin from shrimp shells available near Brunswick.



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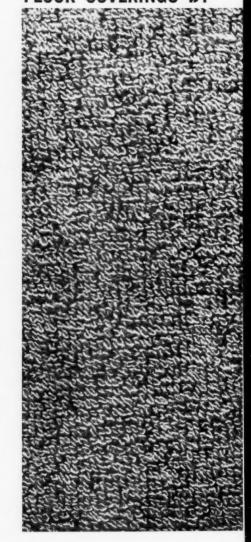
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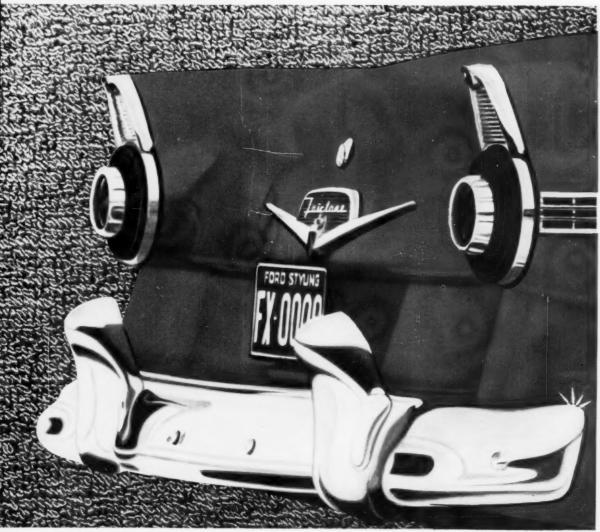
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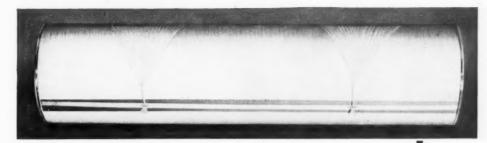
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Yardage per beam? In 3,000 denier for example, our 30" beam (with 576 ends) delivers 2,500 yards; our 36" beam supplies 3,000 yards. Here are deniers now available (with 2 turns, S twist):

450/2S/120 filament 900/2S/80 and 240 filament 1200/2S/80 and 240 filament 2400/2S/160 filament 3000/2S/120 filament 4000/2S/200 filament

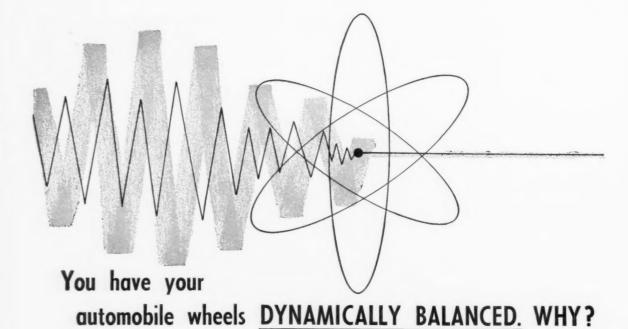
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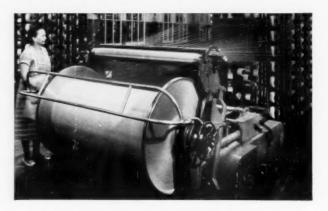
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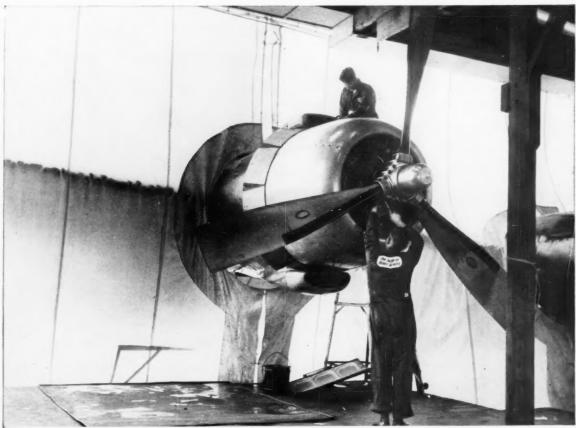
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You are invited to visit the HAYES EXHIBIT. Annex 6, Southern Textile Exposition



**NEW** Herculite translucent engine dock curtain makes light work of engine maintenance for Pan American at International Airport, N. Y. (Photo courtesy Pan American World Airways.)

# New translucent tarpaulin with F-36 fiber speeds engine work

"Right on the beam" is the pleased reaction of Pan American World Airways mechanics to this new translucent engine dock tarpaulin by Herculite Protective Fabrics Inc., Belleville, N. J.

Secret of success of this tarpaulin is the new Celanese stronger-than-steel fiber, Fortisan-36 rayon, which not only provides tremendous strength but also permits translucent construction. The Herculite fabric is a double lamination of vinyl plastic over Fortisan-36 mesh.

According to Mr. Sy Hyman, president of Herculite, Fortisan-36 helps him produce fabrics that are easier to handle because they're substantially lighter for a given strength. These tough fabrics are also waterproof, fire-resistant, rot- and mildew-proof. Key advantages like these, he adds, make translucent fabrics based on Fortisan-36 ideal for applications like marine hatch tents and telephone linesmen's tents.

Find out more about sensational new Fortisan-36, the fiber you can depend on for the tough industrial jobs. Write Celanese Corporation of America, Industrial Sales Dept., Textile Division, Charlotte, N. C. Branch offices: 180 Madison Ave., New York 16; 22 W. Madison Street, Chicago 2, Illinois.

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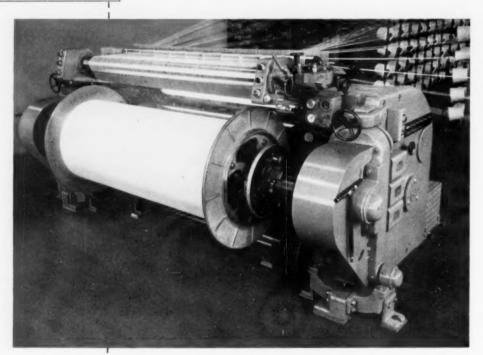
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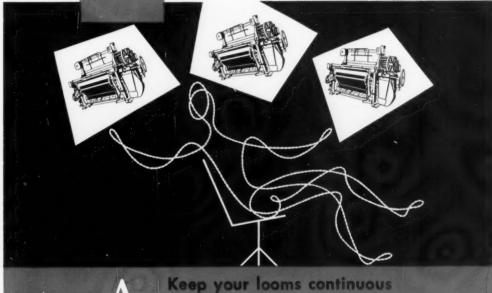
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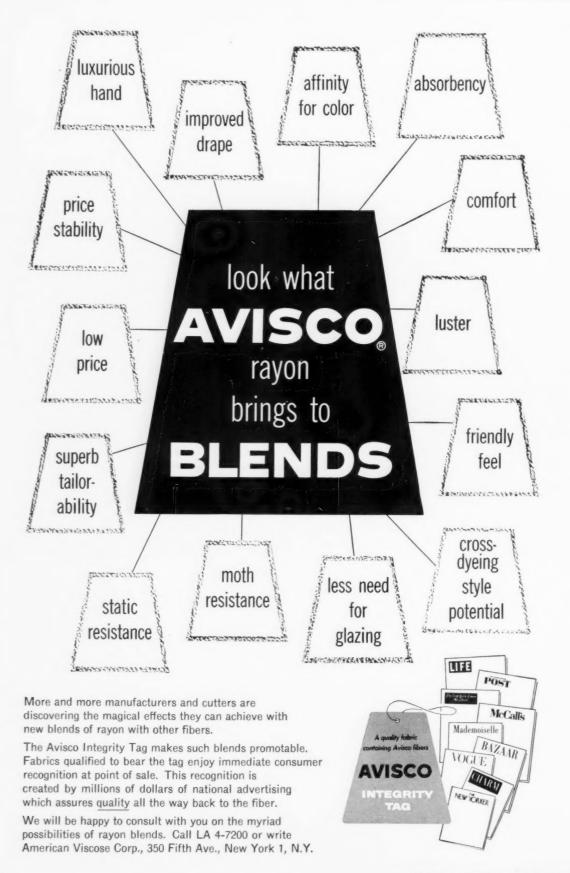
- Easier-handling
- Easier to repair

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BETTER THINGS FOR BETTER LIVING ...THROUGH CHEMISTRY

Du Pont makes fibers, not the fabrics or covers shown here.



#### Publisher's Viewpoint

#### **Another Victory for Performance Standards**

The movement to use objective and reliable minimum performance standards for man-made fiber fabrics moves forward with increasing momentum. That this movement exists and grows steadily in vitality is due to the belief among many thoughtful persons engaged in textile manufacturing that, in the long run, honesty is the best policy—in fact, the only policy by which their businesses can hope to prosper.

Based on long experience in textiles, these people believe that reliable performance standards, strictly maintained, can be tremendously profitable for our industry in a measurable dollars-and-cents way. This belief, it must be said, has its opponents.

There are still influential persons among millmen and converters who take a different position. These persons express their opposition to standards in different ways, but they all add up to a determined resistance to objective, meaningful standards. Some opponents of standards say they are quixotic and foolishly idealistic—not to be taken seriously by hard-headed business men interested in profits and not the public welfare. Other opponents argue that standards are not really needed—that the public wants only the latest styles and does not worry about quality.

But in spite of this nay-saying, the strength inherent in the standards idea, the urgent need for standards if man-made fiber fabrics are to achieve their deserved acceptance by consumers, push the standards movement on to new victories. The latest of these victories is the decision of American Viscose Corp., largest manufacturer of rayon and major producer of acetate, to enforce Standard L 22 of the American Standards Association as the minimum requirement for fabrics certified under its growing "Avisco Integrity Program". (A full report on this decision was found on page 6 of our August issue.)

Under the company's Integrity Program, some 34 converters and 17 finishers already have been licensed. It is estimated that as much as 5 million yards of apparel fabrics are being produced each month in accordance with the L 22 standards. It is thus evident that American Viscose Corp.'s adoption of L 22 as the minimum standard for its program means that a considerable quantity of rayon and acetate fabrics will be going out to the garment trade finished according to the requirements of the American Standards Association.

All this means that with one giant step, thanks to American Viscose, L 22 has made impressive progress toward broad use as the performance standard for rayons and acetate. When we remember that earlier this year, L 22 was put into effect by Reeves Brothers as the standard for all fabrics finished at Reeves' Bishopville Finishing Division, it would appear that L 22 is indeed on the march.

When two large and successful companies such as Reeves and American Viscose make L 22 the standard for their use, who can question any longer the practicality of this standard? Surely, it is time now for the entire man-made fibers industry, including mills and converters, to put aside their doubts and hesitations and get solidly behind this Standard.

> a. Horrecollough PUBLISHER

### OUTLOOK IN TEXTILE MARKETING

By ROBERT C. SHOOK, Textile Economist

#### How Market Looks as Fall Season Opens

Textiles have just completed a cycle of decline. Trough of this cycle, falling in third quarter of this year, precedes fall season which, from viewpoint of retailer, is most important of year. Since a revival in demand should be developing in coming months, a brief review of gains and losses during the most recent textile cycle may be in order.

Inter-fiber Competition Data Needed-Statistical information about use of different fibers in different finished products is either lacking altogether, is highly inadequate, or has little more than historical interest by time it becomes available. Nevertheless, broad developments can be outlined with considerable degree of accuracy.

Apparel markets generally have seen losses for man-made fibers, and gains for natural fibers, although there have been exceptions.

In men's sport shirts, for example, there has been progressive displacement of rayon, acetate and other man-made fibers by cotton. Insistence by consumers that sport shirts be washable, and common belief among consumers that cotton shirts are more dependably washable than shirts made of other fibers has influenced this trend. It is also possible that styling and promotion by cotton interests have been more effective than efforts by man-made fiber producers and distributors.

But Summer Suits Picture Favors Man-Mades—In men's summer suits and slacks, there has been contrasting situation, much more favorable to man-made fibers. Wash-and-wear constructions, which were unheard of before 1952, accounted for substantial part of total business in 1956. According to current buying plans of retailers, there will be further gains for washand-wear garments in 1957.

These two departments-men's sport shirts and men's slacks and summer suits-provide significant contrast. Suit and slack cutters, even in popular price lines, sell their products in price ranges which allow them to pay a higher price for the fabric, as compared with sport shirt cutters in analogous price lines. It has been possible for suit and slack cutters, therefore, to buy fabrics possessing built-in wash-and-wear qualities, while sport shirt cutters in the main have had to depend on resin finished fabrics.

Wool and Silk Have New Popularity -- Among other developments have been further gains in the popularity of wool and silk. In both men's and women's fabrics, woolens and worsteds have enjoyed most favorable demand in some time. Blends have participated in this. Examples are Dacron-wool tropicals and fabrics containing silk. Revival in wool fabric demand, however, does not seem to have been due principally to development of new blends, but to change in the cycle of consumer preference. Demand for silk and silk blends has also been rising steadily. In fact there is danger that silk, because of its high cost is being used in some cases as a sales gimmick, to cash in on growing popularity of this fiber.

Modified Filament Yarns Coming Up-In sweaters and jersey dress and blouse fabrics, in contrast to broad woven goods, newer man-made fibers have dominated market. Although there are indications that acrylic spun yarns in sweater market have reached peak of popularity, there are also indications that knitters and retailers are becoming interested in modified filament yarns for sweaters and also in sweaters containing fur or natural fibers.

How Retail Business is Going—Despite bad weather last spring retail sales for the year to date have been well maintained. Latest reports indicate that wholesale activity during the first six months was approximately unchanged from last year's level. In June, however, wholesale sales of dry goods and apparel dropped 3% below a year ago, reflecting more conservative policy retailers initiated when sales last spring were disappointing.

(Continued on Page 70)

Courtaulds of England pioneered in the American Rayon industry. Forced to withdraw in 1941, the company made plans to come back when the time was ripe. Here is the story of Courtaulds' return and the man who directed it

### Charles Paine and Courtaulds' Return

Staff Prepared

ONE DAY in December, 1952, a group of engineers and management men watched the first rayon staple that measured up to their strict standards come off the production line at the brand-new plant Courtaulds had built in Southern Alabama, some 25 miles upriver from Mobile. They watched the soft, white fiber packed into bales and loaded on trucks for shipment to yarn spinning mills. For these men, English and American, the moment was one of quiet, heartwarming triumph. Courtaulds was back in the American textile market.

The moment of triumph was especially heady for one of them, Charles L. Paine, then executive vice president of Courtaulds (Alabama), Inc. Two years earlier he had come from Courtaulds' head office in London to organize and supervise the building of the plant that was to mark his company's return to the United States.

To bring the new plant into existence and carry it along to the point where it was in commercial production, had been a herculean labor. Its burdens and difficulties had been made especially heavy by the Korean War. Scarcity of steel and other crucial materials had, at times, made it seem that the plant, started in the late summer of 1951, would not be completed on schedule. Paine was handed the job of breaking the bottlenecks that stood in the way of forward motion on the plant's construction. This task was delegated to him by Col. F. T. Davies, a director of the parent company in England who had been appointed president of Courtaulds (Alabama).



Paine and his colleagues, Stanley Wagdin, treasurer of the new Alabama company, and Reginald Garnsey spent many days and weeks in Washington to get priority licenses from government agencies. But, these permits to buy steel and other scarce materials were no more than "hunting licenses", as Paine now says. Once they had the government permits, they had to search the country and even go abroad to acquire steel.

But in spite of these difficulties and mainly because of the patient, tireless efforts of Paine and his fellow workers, the plant was completed in 15 months. By February of 1953, Courtaulds (Alabama) was actively soliciting orders for the rayon staple coming out of its new plant which it described quite accurately in trade advertisements as the "newest, most-up-to-date and efficient rayon staple plant in the world".

The second appearance of Courtaulds on the American man-made fibers scene was almost a foregone conclusion in view of the great success that attended the company's three decades as America's largest rayon producer. Although claims for "firsts" are almost always disputed it would be hard for any one to deny that the Courtaulds-owned American Viscose Corp. was the first successful large-scale producer of rayon in the United States. Back in England in 1904, Courtaulds, an old-established silk weaving company, had plunged into the business of making "artificial silk".

By 1910, so great was the success of the venture that the company's directors, with remarkable foresight, decided to establish an American subsidiary at Marcus Hook, Pa. How this company, which finally came to be called American Viscose Corp., flourished and grew mightily under the leadership of the remarkable Samuel Salvage is a well-known story.

But it was a story which in 1941 appeared to have an unhappy ending for the parent company in England. For in June of that year, Great Britain fighting alone against a triumphant Germany, fighting with its back against the Atlantic, desperately needed the aid which seemed about to be placed at its disposal under pending lend-lease legislation. President Roosevelt had announced the doctrine of lend-lease,



RAYON STAPLE MARKETERS—A. A. Macdonald (left) vice president in charge of sales, and William H. Ward, southern sales representative for Courtaulds (Alabama) have the job of selling the fiber produced at the plant in LeMoyne near Mobile.

describing its intended purpose in the homely analogy of "lending your neighbor a garden hose when his house is on fire." Congress was getting ready to enact lend-lease into law. Meanwhile, U. S. Treasury Secretary Henry Morgenthau, Jr. was urging the English Government to dispose of English assets in the United States so as to remove all objections in Congress to the sweeping terms of the bill that would bring American resources to England's aid without price tags.

In this situation, the American Viscose Corp., as one of the largest and most profitable English-owned companies in the United States, was chosen as the sacrificial lamb. The British Government took over from Courtaulds about 90% of the stock of American Viscose and sold it to a syndicate of American investment firms for eventual resale to the American public.

#### Nostalgia for the U.S.

Its ownership of American Viscose had been dear to Courtaulds and its regard for the profit potential of the American market was high. Hence, as soon as the war ended, Courtaulds' directors began to think seriously of re-entering the American scene. They resolved to keep a sharp eye on the man-made fiber industry in the United States. One of the men to whom they delegated this task was Charles Paine, a studious young economist and market analyst. He had come to work for Courtaulds in 1937 from the University of London where he had taken his degree of Bachelor of Commerce and where he had worked as a research assistant. With Courtaulds he had been advanced to more and more responsible work in charge of a growing department engaged in market research and economic studies.

During the war years, he had been enlisted by the Ministry of Economic Warfare which put to good use his special skills as an economist. Attached to the British embassy in Madrid, he worked skillfully at the delicate task of persuasion and subtle maneuver to limit as much as possible the passage through neutral Spain of items needed by the German war effort. This was decidedly a "silent service" but one of crucial importance to ultimate victory. It was work requiring patient and diplomatic negotiation—experience that was to be useful to Paine when later he came to negotiate in Washington for the government licenses needed to construct a big rayon staple plant during the Korean war.

In 1945, Paine returned to Courtaulds to resume his work of market analysis and study of economic trends. In keeping with Courtaulds' strong interest in re-establishing itself in the United States, a major part of his work was devoted to study of the American textile market. His studies during this time, reinforced by several trips to the United States, were influential in the important decision reached by Courtaulds to confine its new American plant solely to rayon staple.

When Courtaulds decided that the time had come for it to build its new plant in the United States, it was fitting that the directors should choose Paine for an important part in the new enterprise. They had come to realize that this young man had abilities far beyond those of a professional economist, and so he was assigned to accompany Colonel Davies to the United States in 1951. Davies was in charge of all Courtaulds' widespread overseas activities, and hence he turned over to young Paine a major part of the responsibility of organizing the construction of the new American plant.

#### Shows Engineering Aptitude

In carrying the task to completion, Paine richly justified the confidence Courtaulds' management had in his abilities. He demonstrated an amazing capacity to educate himself in new areas of technology in the midst of a heavy press of work that consumed most of his waking hours. Possessed of the academic training of an economist, he had no background in engineering. Yet such is the remarkable quality of his mind that he was able to inform himself in far more than a superficial way about complex engineering matters in connection with the building of Courtaulds' plant.

He plunged into these new areas of knowledge and acquired a grasp of engineering because it was helpful to him in the task he was carrying on. Courtaulds' engineers and the engineers of the H. K. Ferguson Co., builder of the plant, learned to respect his engineering knowledge and value his politely offered suggestions when confronted by a knotty problem or a particularly baffling shortage of materials.

Once the Alabama plant was built and in operation, Paine was confronted with the vital task of building both a sales force and a market for his company's staple fiber. A. A. Macdonald, a Courtaulds veteran with a fine record of selling staple fiber in England, was brought over as vice president in charge of sales. William H. Ward, a man who had built up a respected reputation as a rayon salesman with North American Rayon Corp., joined Courtaulds (Alabama) as a sales representative with headquarters in Greensboro, N. C. Richard S. Thomas came on from England to be vice president in charge of plant operations, relieving Reginald Garnsey who had held the post when the plant was in its initial stages of operation.

(Continued on Page 74)

KEY MEN AT COURTAULDS—Roystan Dunford (left) director of development and public relations and Stanley Wagdin, treasurer, are both Courtaulds veterans who have settled in the United States.





#### **Better textures**

### in nylon carpets

Follow these detailed instructions to heat set IRC nylon for permanent carpet textures

Staff Prepared

A NEW METHOD for heat setting yarns spun of Industrial Rayon Corp.'s nylon staple, to achieve a greater variety of permanent textured surface effects in carpets was reported recently. A description of the effects obtained by the new process is found in the May issue of this magazine on page 38.

Now Industrial Rayon has released instructions on how the new method can be applied in a mill processing carpet yarn spun from the new nylon staple. The method can be used for yarns intended for woven or tufted carpets, or for carpets made by other methods such as knitting on a raschel machine, and in high or low cut pile. With the new method for heat setting yarns, a variety of textured effects can be achieved including saxony, hard twist and frieze effects.

Since hard twist and frieze textures are most widely used among textured effects in carpets, the following instructions are written specifically to obtain yarns for these types of carpet. However, the same instructions apply to achieve other textured effects such as saxony or longer pile tipped constructions.

Whenever stock dyed yarns are used, dyes with good wash fastness and heat stability should be chosen to prevent possible shade changes during the setting operation.

The first step in utilizing the special heat setting properties of Industrial Rayon's crimped and set nylon staple is to start with singles or plied yarns of customary counts which can be spun on any system generally used in making carpet yarns. For such yarns 8 or 15 denier staple is customarily used and staple lengths are cut to fit the spinning selected.

For cotton system spun yarns the twist multiple in the ply will vary between 7.5 and 9.5. While the higher twist is desirable for maximum kink, the lower twist multiple can be handled more easily in tufting. In the case of the singles yarn going into the ply, it is advisable to use the lowest twist that will give a satisfactory spin. Preferably, such twist should not exceed the range from 2 to 5 turns per inch. The direction of the singles twist should be opposite the direction of the ply twist.

It is also possible to get interesting frieze effects by using the ply twist in the same direction as the singles twist.

It should be stressed at this point that the twist in a hard twist or frieze yarn is an *unbalanced twist*. On the other hand, in order to get a saxony or nubby effect, a *balanced twist* is recommended. For a two-ply saxony yarn, the ply twist multiplier is 4.5; for a three-ply yarn it is 3.75. In either case, for a saxony effect, the singles twist should be approximately half a turn higher and in the opposite direction from the ply twist.

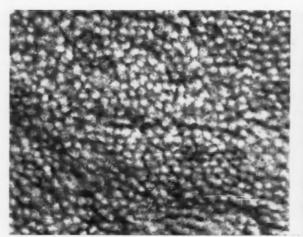
After the yarn is twisted and plied, the next step is to put it into skeins. These should be made up so that each twister bobbin yields one skein. In this way, excessive knots are avoided. In other words, the bigger the skein, the more economical they are to handle

Under no conditions should an attempt be made to work with skeins weighing less than one pound. In winding skeins, the most efficient reel or swift size is about 90 to 96 inches. Smaller reels or swifts can be used, but they should not be less than 54 inches.

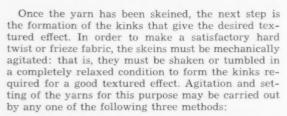
LEFT—Skein of 100% IRC nylon Saxony yarn—twist set. Yarn of this type yields a fabric as shown on the left in the illustration on page 34.

RIGHT—Skein of 100% IRC nylon frieze yarn—twist set. Yarn of this type yields a fabric as shown on the right in the illustration on page 34.





Here is a close-up of the surface of a 100% IRC nylon carpet— Saxony (nubby) styling—twist set.



#### Method One: By Scouring

In the first method, the skeins are placed in a scouring machine. Scouring should be carried out under constant agitation for 15 to 30 minutes at a temperature of approximately 100 to 130°F. Scouring of the skeins in this way achieves a triple purpose: (a) It forms the required kinks. (b) It cleans yarn of spinning oils and grease and other soil and thus prevents discoloration or spots later on. (c) It puts moisture in the yarn to get a better penetration reaction in steaming later. Moisture is needed in the skein for effective twist setting.

The next step is to set the twist in the yarn. This step is opened by a preliminary extraction of excess moisture from the skeins by use of a standard vacuum extractor. Once this has been done, actual heat setting can be achieved by two methods.

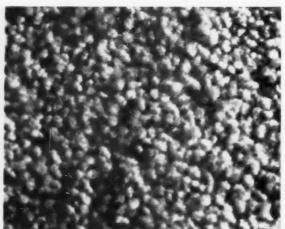
One method is to steam the yarn in an autoclave for 30 minutes at 260°F. (20 pounds steam pressure). The second recommended method is to steam yarn at 212°F. for 120 minutes at atmospheric pressure.

#### Conditioning the Yarn

After the yarn has been heat set, the final step is to condition or dry the yarn evenly before coning. During this conditioning period, the skeins should be thoroughly relaxed so as to get equalization of moisture content. In this connection, millmen are cautioned that to cone a yarn before equalization of moisture content is often a source of trouble.

#### Method Two: Boiling

In the event a mill is not equipped with scouring and steam facilities, the following method can be used to heat set the yarn. Skeins should be placed in a kettle with water at 90°F. along with a wetting agent such as Nacconol NR or Alrowet D 25 Clear. If a dyed yarn is being set, it is advisable to maintain a pH between 5.5 and 6.5 in the setting bath.



A close view of 100% IRC nylon carpet—frieze styling—twist set.

This pH adjustment will reduce the possibility of bleeding during the wet treatment. The yarn should then be agitated and the temperature of the bath raised slowly and uniformly over a period of 45 minutes until 212°F. is reached. The yarn should remain in the bath for 60 to 90 minutes with the temperature at 212°F.

However, if the mill is equipped with a pressure machine, the lid should be closed and the temperature raised to 260°F. and held there for 30 minutes.

At this point the yarn has been twist set. It is then removed from the kettle and the moisture is extracted. Next, it is dried in a completely relaxed condition by any of the equipment customarily used for this purpose such as apron, tunnel, tumble or hot air dryer. Temperatures in the dryer should be in the range of 220 to 280°F. Following drying the yarn is conditioned before coning as described above under the heading, "Method One".

In Method Two, heat setting without steam, dyestuffs can be added to the bath and the skeins dyed if they are in the greige. This can be done in an open kettle at  $212^{\circ}$  or under pressure at  $260^{\circ}F$ .

#### Method Three

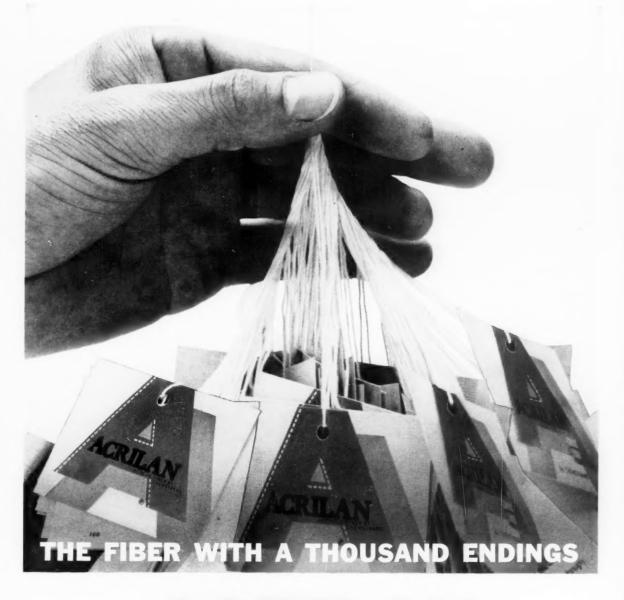
The third method of heat setting the skeins is intended for use by mills not equipped with skein dyeing, pressure or agitating equipment. In such case it is assumed that the mill possesses only stock dyeing equipment.

Here is the recommended procedure:

The skeins can be tumbled or agitated mechanically at room temperature to create the necessary kinks by using a laundry tumbler, or shaking table or trough, or some other device that will agitate the yarns until the kinks form. Some mills improvise their own equipment for this purpose following the basic principle that a device for thoroughly shaking up the skeins is what is needed.

After the kinks have been formed, the yarn may be twist set by: (a) boiling at 212°F. at atmospheric pressure for 120 minutes; (b) boiling at 260°F. at 20 pounds per square inch pressure for 30 minutes. In each case the bath should contain a wetting agent and have a pH of 5.5 to 6.5 if dyed yarns are being set.

Directions for extracting, drying, conditioning and then backwinding to cones should be followed as set out in detail in "Method One" above.



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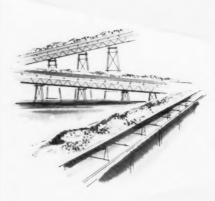




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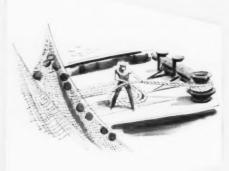
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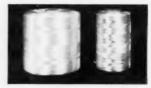
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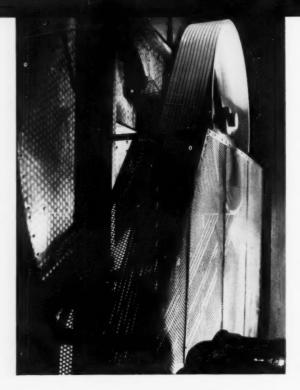


by Jerome Campbell EDITOR, MODERN TEXTILES MAGAZINE



PROGRESS REVIEW & FORECAST

1956 • 1957



# RAYON

- rayon-cotton outlook brighter
- solution-dyed staple gains
- stronger staples for industrial uses

Rayon as the biggest volume man-made fiber (over 900 million pounds produced in 1955) felt early and painfully the ebb in demand that marked the textile industry in recent months. But against this background of declining sales, rayon's producers pushed their versatile fiber, largely in the form of staple, into new end uses, hoping that some of them would lead to new heavy volume markets.

Continuing a trend reported in this review last year, combinations with cotton provided the greatest number of new and promising developments for rayon in the past 12 months. Among these were the appearance of an 80 x 80 print cloth woven of 70% cotton and 30% rayon produced by both Iselin-Jeferson and Deering Milliken for finishing by Dan River Mills who sold it in a variety of patterns under the tradename "Zephyr" prints. Another cotton-rayon blend to appear in the proportion 66 2/3 and 33 1/3 was Reeves Brothers' carded broadcloth "Cello" line of prints. Still another new cotton-rayon was presented in July by Bates Fabrics, Inc. Trade-

STRENGTH IS IMPORTANT HERE—In V-Belts for driving heavy industrial equipment, high tenacity rayon finds one of its typical and growing uses.

named "Corazelle", and given a Bates "disciplined" finish, the cloth is available in summery floral prints.

The appearance on the market of these volumepriced cotton-rayon prints was regarded hopefully by rayon people and forebodingly by spokesmen for cotton growers as the first tangible evidence of a slow-ripening, gradually strengthening, perhaps long-range trend on the part of cotton manufacturers to use more and more rayon in blends with cotton in a whole host of volume-yardage standard constructions

Advantages of adding rayon to cotton, according to rayon's spokesmen, are a lustrous "combed" hand and appearance in carded fabrics; a cleaner, whiter, less neppy cloth; and, when dyed or printed, greater receptivity to color, giving a warmer, more brilliant appearance.

Cotton's spokesmen, on the other hand, have a different attitude toward rayon staple fiber combined with cotton. Although they admit, significantly enough, that rayon in the blend gives cotton a better appearance and luster, they add that these gains are more than offset by losses in tensile and tear strength, wear life and launderability. Serious concern over the growing use of rayon with cotton has been expressed recently by the National Cotton Council in its booklet "Price and the Future of Cotton," a report prepared by three staff members, Horne, McCord and Townsend. In their extensive study, the authors attribute rayon's gains in the past year or so to the fact that it is cheaper than cotton. Its lower cost, they say, endears it to the mills at a time when rising costs and falling profits make cotton weavers extremely anxious to cut raw material costs. The authors, experienced economists and market analysts, state that mills pay four to eight cents less for rayon than cotton. According to them, many cotton mills are blending rayon with cotton without announcing this fact. On page 15 of their report, they quote the president of one cotton mill as telling them that "we are all sneaking it (rayon) in."

Meanwhile, as the Cotton Council worries over the growing use of rayon staple, the country's capacity to produce it, currently running about 460 million pounds a year, will shortly be reinforced by the coming into production of a new plant. American Enka reports that its new plant at Lowland, Tenn., is running on schedule and that output will most likely get under way in December. Capacity is expected to be somewhat larger than the originally rated 50 million pounds.

Another noteworthy new use of rayon combined with cotton was a new denim introduced by M. Lowenstein & Sons, Inc., woven at that company's big Lane Cotton Mills. The new fabric has a filling of American Enka Corp.'s Jetspun® solution-dyed

LETS LIGHT IN, KEEPS WEATHER OUT — Constructed of a loose mesh weave of Fortisan-36 laminated between vinyl, this curtain permits passage of light to mechanics working on plane engine while protecting them from weather.

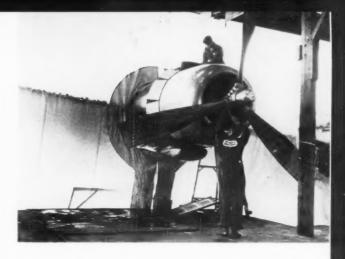
high tenacity rayon filament combined with a vat-dyed cotton warp. This joining of solution-dyed rayon with vat-dyed cotton, according to Lowenstein and Enka, gives the cloth superior appearance and wearability even after many washings. Priced initially at 52½ cents a yard compared with 39½ cents for vat-dyed all-cotton denim, the new fabric is said to be gaining acceptance, especially as a fabric for sports and leisure wear where its better appearance gives it an edge on ordinary denims.

For womenswear, Jetspun was combined with cotton in a notable plaid line by H. L. Klebanow & Sons for washable sportswear, dresses and separates. This rayon filament's high strength and outstanding fastness to light also caused it to move ahead in draperies, upholstery, slip covers and outdoor furniture tapes aided by 11 new colors brought out by Enka especially for home furnishings. In the companion end use of auto seat covers, where Jetspun made its first success, the yarn continued to move ahead. Still another end use for Jetspun has been in a group of striped linings for men's tailored garments woven by Skinner.

The principle of solution-dyeing rayon proved its soundness in the past 12 months by making gains in another form—rayon staple. With 19 colors and a vigorous promotional program, Courtaulds (Ala.) Inc. set the pace for widening the market for this form of staple. American Viscose Corp., with eight colors also seemed increasingly aware of the potentialities of solution-dyed rayon staple.

In auto upholstery, virtually all car manufacturers were using fabrics made with solution-dyed rayon staple because its color-blending properties make it easy to get fabrics to harmonize with the rainbow hues of auto exteriors, and because of the fiber's unmatched resistance to light fading. This latter advantage is especially noteworthy in the usually fugitive shades of turquoise and peacock blue. The same fastness properties made solution-dyed rayon staple fiber advantageous in home furnishing and upholstery fabrics. Price also is an advantage here. Solution-dyed staple is often cheaper than conventionally fast-dyed fabrics especially in black for which Courtaulds' price is 37 cents. Prices for other colors run up to 56 cents.





Solution-dyed staple made another recent important advance when Hartford Rayon Co., a division of Bigelow-Sanford Co. introduced a 15 denier, three-inch solution-dyed staple especially developed for carpet use. In addition to the usual exceptional light and cleaning fastness of solution-dyed fiber, the new carpet staple, tradenamed "Kolorlok" offered carpet makers the valuable property of color uniformity, through yard after yard and roll after roll.

In knitwear, too, a stunning success was achieved in the past 12 months by Beaunit Mills. Using its own Bemberg yarn in tricot knitted in its own plants, Beaunit applied a new and secret finishing process. The process gives rayon tricot residual shrinkage of no more than three per cent, permitting it to be advertised as fully washable and quick drying. Bemberg sold the fabric to a carefully selected group of cutters who used it in well-made popular priced ladies' underwear, men's sleepwear and women's and children's double quilted robes. More than 1500 retail stores have sold the items in successful promotions, and this knitted fabric, tradenamed Bemberg Pre-Shrunk® is still going strong. So far huge quantities have been produced and sold, and the number of garments it has been cut into has reached astronomical quantities.

In filament yarns, American Bemberg achieved another resounding success with its slubbed novelty yarns. Outstanding among these has been its Cupioni, developed with great success to imitate the special qualities of silk douppioni. Appearing at a time when silk and cotton and silk and wool mixtures were growing popular, Coupioni caught on like wildfire. Combined with cotton in shantung type fabrics it sold in the gray for about 55 cents compared with \$1.05 for comparable fabrics containing silk. In addition to having the hand and appearance of silk, Coupionicotton cloths were machine washable at 140°F., with residual shrinkage no more than two per cent. They have been used in a wide range of apparel end uses ranging from dresses to women's shoes and including robes, shirts, pajamas and pedal pushers.

The vast and diversified area of industrial uses is becoming increasingly important in the thinking of rayon producers. Steady gains in finding new, advantageous uses of rayon, both filament and staple, have been going on in recent months. More can be expected in the future. Tire cord, of course, remains far and away the major industrial use for rayon. Al-

RAYON IN FASHION USES—Here are two examples of rayon's aptness and versatility in womenswear. On the left is a black and white shirtwaist dress by Nancy Greer cut from an Avisco rayon shirting. On the right, a sheath dress and short-sleeved coat.



though rayon producers concede that nylon will undoubtedly increase its poundage in this field, they are confident that rayon will remain for the foreseeable future the dominant fiber in tires.

High tenacity rayon filament yarn, already well-established in industrial applications, made advances in tire chafer fabrics, auto safety belts, a growing variety of heavy duty drive belting, conveyor and elevator beltings, carpet backing and hose. To these has been added an interesting new use—rayon sewing thread for multi-wall paper bags. Because of the high strength of the rayon, thinner thread may be used, permitting savings as much as 30% compared with natural fiber thread costs.

Slated for growing use in industrial applications is a form of rayon generally new to this field. This is the new "strong rayon staple", developed in this country by American Viscose and known as Viscose 32-A. One of the first successful uses of this newly introduced material has been in heavy duty conveyor belts. According to American Viscose, exhaustive trials reveal a two-way economy with this "strong staple" in conveyor belts. Measured in terms of tensile strength, Viscose 32-A has a lower cost per pound when compared with regulation cotton fabric. Studies show, for example, that, in a conveyor belt, 24 oz. per square yard duck of Viscose 32-A might be used to replace a 28 oz. per square yard cotton duck. Also the rayon's great strength combined with lighter weight allows further saving from the use of lighter pulleys, shafts, and bearings.

#### Fortisan Makes Gains

Fortisan, the special type of strong rayon yarn produced by Celanese, was joined in December by a new form, Fortisan-36. The new fiber, now in production at their plant in Rome, Ga., is said to have properties of great strength, low elongation and dimensional stability. It is aimed primarily at industrial applications such as V-belts, transmission and conveyor belting, high pressure hose, tarpaulins and as a versatile protective fabric when laminated between two outer vinyl coatings. In this end use, its translucency and weather resistance makes it especially good for linesmen's tent, hatch covers, and portable repair shelters.

Originally available in 800 and 1600 denier continuous filament at \$1.45 a pound, Fortisan-36 was recently brought out by Celanese in 400 denier also at \$1.65 a pound. Anticipated uses for the 400 denier yarn are home furnishings, apparel and such industrial applications as electrical core thread, mechanical rubber uses, cotton duck reinforcement and sewing thread.

NEW RAYON-COTTON FABRICS—The boy is wearing pants of denim woven with a vat-dyed cotton warp and a filling of solution-dyed high tenacity rayon produced by American Enka. The hooded young fellow is wearing an industrial coverall cut from blended fabric, one-third rayon staple fiber and two-thirds cotton and equipped with a durable flameproof finish. This garment, made in England, is one of the new industrial fabrics of rayon-cotton developed there by Courtaulds

Meanwhile, Fortisan itself has been making gains in sheer draperies both as a warp yarn and in 100 Fortisan constructions. It is also showing promise as an ingredient fiber contributing strength to upholstery cloths.

#### WHAT'S AHEAD FOR RAYON

For rayon, look for the unexpected. By this is meant that rayon producers are pushing forward with research and development programs they hope will open totally new uses for rayon, especially the newer forms of rayon on which emphasis is centered today such as solution-dyed staple, and high tenacity filament. In the thinking of rayon producers, a myriad of potential industrial applications promise a host of new, highly specialized markets for rayon.

Among the new fields where rayon can be expected to make gains in the future are non-woven cloths for laminates and plastic coatings, for disposable garments such as hospital smocks, food workers coveralls, childrens' party costumes. Medical and surgical uses in absorbent materials where cotton was formerly employed, and in bandages can be expected to increase.

Rayon staple fiber will continue to seek out new markets in fabric constructions, traditionally held by cotton, such as print cloths, denims and other utility fabrics. But progress here may be slower than originally expected—opposition of cotton growers and reluctance of mills to use word "rayon" in describing fiber content of fabrics may be important reasons for lack of speed in this direction.

Then it must be remembered that one or two or even three swallows do not make a summer: an occasional new fabric of cotton-rayon does not necessarily presage a broadscale turn to rayon staple by the big cotton mills. Cotton-rayon blends and mixtures have been used from time to time ever since rayon appeared. In short, it is reasonable to expect an increasing number of cotton-rayon fabrics but no big sweep in that direction.

In filament yarns, expect continued successes for American Bemberg's novelty yarns, and watch for this company to score new hits with still newer yarns such as its forthcoming dye resist yarn. This yarn is made with spots distributed at random which resist all known dyes. Many fresh and attractive novelty effects can thus be achieved with it at low cost.

Also in filament yarns, do not be surprised to see increased demand for crepes including crepes of lofted acetate and rayon. Incidentally, any substantial market movement toward crepes will find the needed 75 and 100 denier yarns not easy to get, so great has been the cut back in these yarns.

Expect in the future that major rayon producers' currently expanded research will result in new, better forms of rayon. Among these may be rayon with greater wet strength and with dimensional stability in laundering built into the fiber, ending need for resin finishes.

ACETATE AND COTTON—The increasing popularity of acetate and cotton is demonstrated here in this dress-and-jacket cut by Royal Frocks from a Cohama pongee print

A SURGE of new energy marked by new yarn forms, new end products and new vitality in merchandising has characterized acetate production during recent months. Among outstanding developments have been the appearance of bulked acetate yarns, a host of new fabrics made with acetate combined with cotton, and encouraging advances into broad use by the newest form of acetate, Arnel, the triacetate fiber introduced last year by Celanese.

Bulked or lofted acetate filament yarns, as they are sometimes called, have been introduced recently by Eastman Chemical Products, Inc., and Celanese Corp., both in natural and in solution-dyed colors. Meanwhile, acetate yarns lofted under Du Pont's Taslan process have also been used in a number of outstanding fabrics.

Eastman's lofted yarns come in deniers from 170 to 5,300 in bright and dull natural types and in 25 solution-dyed colors.

Lofted (or bulked) yarns, according to their producers, combine some of the best properties of both filament and spun yarns. Lofted yarns give greater cover than continuous filament yarns, and fabrics made from them are said to have greater strength, higher luster and better uniformity than fabrics made with spun yarns. Another point in their favor is that they give fabric designers another element to work with. He can get new fabric effects by manipulation of denier, filament count and twist of lofted yarns, and by combining them with spun and ordinary filament yarns.

For its bulked yarns, especially in the solution-dyed form, Celanese sees promising markets in home furnishings where they fit into the trend toward lighter weight drapery fabrics. For these yarns also this fiber producer looks forward to increased consumption in apparel fabrics where a dry, crisp hand is wanted. Celanese has under way a development program for bulked yarn fabrics which it expects will stir interest among mills and converters looking for new things.

Acetate combined with cotton, heavily promoted by Celanese this year and pushed also by other acetate producers, has caught on "fairly well" as one yarn producer puts it. It is expected that this combination will continue to grow in popularity since cotton-acetate mixtures have great color possibilities when solution-dyed acetate is used and fit well into the current strong consumer preference for ease- of-care fabrics.

A significant new development in cotton-acetate combinations is the use of cotton with heavy denier acetate, such as 2,100 denier, for furniture covering fabrics in many cases jacquard-woven, and liberally laced with metallic yarns for glitter and fancy eye appeal. These fabrics are said to be catching on wonderfully with volume producers of medium and lower priced furniture, especially bed-sofas. This development is especially heartening to acetate producers for the furniture market is a big one, estimated to run as high as 300 to 400 million yards of 72 inch goods yearly.



# ACETATE

- bulked yarns stir interest
- acetate-cottons move ahead
- printed acetates revived

Another new development in acetate in recent months has been the commercial appearance of a new fire-retardant acetate filament yarn produced by Celanese. Offered in both natural and solution-dyed form, the yarn found its first market in dolls' wigs where little girls can set and reset it in various hairdos without using heat. Celanese sees the yarn's fire resistance as a property which will make it advantageous in decorative fabrics, especially those used in public buildings, trains, airplanes, busses and ships.

Crystal yarns, introduced several years ago, continued as an important element of acetate sales. Used with silk, nylon and acetate warps, both natural and solution-dyed, these yarns in the past 12 months have increased in consumption. They give glitter and crispness to highly styled womenswear fabrics, and permit new creativeness in the design of novelty fabrics.

During the summer, Eastman announced that it would no longer produce acetate staple fiber either in the natural form or in solution-dyed colors. Dissatisfaction with prevailing prices for these items was given as the reason. Eastman will continue to manufacture acetate tow for non-textile users.

Acetate will be manufactured in Chile within the next 18 months. Celanese Corp. of America recently announced that its foreign subsidiary, Celatino, S. A. will build a plant in Chile with an initial capacity of three million pounds annually. It will be operated by a newly organized Celanese affiliate, Celanese Chilena, S. A.



Through Celatino, Celanese Corp. of America also has acquired a stake in acetate manufacture in Japan. Celatino recently reached agreement with Mitsubishi Rayon Co., Ltd., to supply licensed use of processes and technical knowledge in a new company that will turn out initially six million pounds of yarn and fiber annually.

#### NEW ARNEL DEVELOPMENTS

Arnel triacetate fiber, Celanese reports, is making rapid progress toward widespread commercial use. Output is currently allotted among customers with fabric production reaching "multi-million" yards per month. New capacity, now being readied by Celanese, will not be in production for several months. Meanwhile, Arnel in such basic fabric constructions as sharkskins, flannels, challis, crepes, cotton-blends, tricot jerseys, suitings and failles is being cut into a wide range of apparel by leading garment makers.

Many of these items will reach consumers in retail stores this fall. Celanese management is waiting impatiently for consumer reaction, and it is said that other fiber producers are also watching Arnel's progress with keen interest. If the fiber continues to gain ground, it may be that Celanese will be faced with competition in the form of triacetates produced by others. Industrial uses for Arnel are also being tested by Celanese which says that its new fiber has demonstrated economic advantages in such non-apparel uses as dust collector bags, laundry pads, printed circuits and electrical tapes.



ARNEL TRICOT—High style lingerie is one of the major uses Celanese has in mind for its new Arnel triacetate fiber. Arnel's easy machine-washability, dimensional stability and ability to take a hot pressing iron are said to be the fiber's advantages here

#### WHAT'S AHEAD FOR ACETATE

In today's sharply competitive and fast-changing textile industry, millmen, converters and garment makers are searching widely for new things in fabrics. They are open-minded as never before, and willing to evaluate the possibilities of fresh directions for familiar fibers. Hence among these people the chances are good for a genuine revival of interest in accetate's time-proven advantages as a textile material. This is especially true for that segment of the industry on the lookout for new fashion fabrics for both sexes—fabrics where a touch of elegance and luxury is the most wanted feature.

These considerations prompt the advice from seasoned fabric marketers—don't sell acetate short. Specifically, expect in coming months to see acetate bulked and lofted yarns used increasingly in dress fabrics and in draperies. In both fields their distinctive properties will permit creation of new textures and color effects, especially when these yarns are used in their solution-dyed form.

In fashion fabrics, bulked yarns will be used more and more to provide new fabrics in that increasingly important group that falls between the extremely luxurious and the extremely casual. Bulked and lofted acetate yarns in the coming fall season will be employed in fresh approaches to classic crepes in combination with rayon. Failles will make their appearance made of lofted acetate yarn and silk. Also in the area of dress-up fabrics will be interesting new baratheas of acetate-silk. Another promising new fabric which will appear this fall in dresses is a warp twisted faille woven of all solution-dyed acetate, the twisted warp giving the cloth a novel iridescent effect.

Expect cotton-acetate fabrics to hold their own and gain a position as a standard textile construction with new textures and weaves keeping interest in this combination alive. Cotton-acetate fabrics will remain particularly strong in men's shirtings, holding and possibly expanding their volume in lines of major shirt makers who already have this fabric in their lines. Among these are Van Heusen, Cluett Peabody, Manhattan and McGregor-Doniger. Having established itself in flat fabrics, the cotton-acetate combination in coming seasons will move ahead into a variety of textured dress fabrics such as brocades and complicated jacquard weaves.

Another new trend to watch is the growing interest in printed acetates, particularly prints on acetate satins. A few leading print houses are currently setting the pace in this development with groups of fabrics featuring striking designs. This trend is expected to catch on farther down the price scale where the big volume lies.

For Arnel, the new triacetate fiber, the coming months will be crucial. Consumer response to the wide variety of Arnel fabrics soon to reach the stores will tell Celanese whether its big gamble on triacetate will pay off. If consumer response goes the way Celanese hopes are running, you can expect Arnel to replace acetate in gradual stages in a wide range of constructions where ease-of-care is a big sales point, especially in blends with cotton. These include women's dresses, blouses and sportswear, children's dresses, men's and boy's shirtings, lingerie. The stakes here are big.

ACETATE HAS OTHER USES—Equipped with a water-repellent finish, this printed acetate taffeta makes an attractive and practical shower curtain

WITH FIVE companies now producing and seeking customers for nylon, and plant capacity moving to new highs, efforts to open new markets for this fiber, understandably have been greatly intensified in recent months.

Producers of nylon, both old hands such as Du Pont and Chemstrand and newcomers like Industrial Rayon, American Enka and Allied Chemical are poking and prodding into every corner of textile manufacturing to see if they can find new areas where nylon can serve better than some other fiber, and thus

be sold at a profit.

High in the regard of nylon people these days is the vast and variegated field of industrial yarns and fabrics. And in industrial end uses, nylon producers regard tire yarn as their trump card in a game against rayon where the stakes are high—annual consumption is running today at 400 million pounds a year. So far in this game, nylon is building its winnings steadily but not as fast as it expected. Last year, for example, nylon for tire cord amounted to 50 million pounds—up 20 million pounds over the year before. But rayon tire cord production reached 406 million pounds—up 82 million pounds over 1954. This year, with tire consumption down, it is estimated that output of nylon for tires will reach 65 million pounds compared with 333 million rayon.

For a detailed study of the future of nylon in the tire cord market see R. C. Shook's article in our July

issue, page 32.

Nylon for tires so far has been type 66 produced by Du Pont and Chemstrand. Type 6 nylon, the kind made by Industrial Rayon, American Enka and Allied Chemical, is being studied by several big tire producers. Some of these studies are reported to have turned up disappointing results for some nylon 6 producers. Other studies are still going on and the final results will not be available for at least another year.

Another important industrial market for nylon coming forward rapidly is the use of the fiber in neoprene or vinyl coated tarpaulins. Compared with cotton traditionally used in these fabrics, nylon's major advantages are lighter weight, permitting easier handling, and far longer wear life, resulting in lower costs. One millman, A. H. Griffen of Amerotron sees the tarpaulin market consuming 20 million pounds of nylon annually and providing fabric sales of \$50 million.

In addition to truck covers, coated nylon tarps are being used for big tents for grain storage, and covers for athletic fields, oil rigs and ship hatches. Also in a first appearance in less humdrum uses, 26,000 square feet of vinyl coated nylon were made into a big music tent last summer down on the Brandywine only ten miles from Du Pont's home town of Wilmington, Del.

A use for nylon which has emerged in recent months as an important new market is sewing thread for shoes. High strength, resistance to moisture and rot are the advantages of nylon in shoes, and both Du Pont and Chemstrand are working hard to see that nylon replaces other fibers in this field.

SHORTER SLEEPWEAR—Soft brushed nylon fleece from Princeton Knitting Mills is the fabric used in these new pajamas with the little girl look In the area of home furnishings, nylon producers currently are moving strongly to take over a big portion of the carpet market. No longer stressing nylon as a strengthening ingredient in blended carpet fabrics, nylon people are pushing hard for 100% nylon constructions.

Nylon carpets have been around for years, of course, but until recently only as high-priced specialty fabrics for such limited uses as hotels and airplanes. But with nylon staple prices down to \$1.20 a pound and poorer grades of carpet wool selling at 85¢, nylon producers see no reason why the common people (there are so many of them) should not floor their homes in springy, long-wearing polyamide fabrics.

And so with Du Pont, as dean of nylon makers leading the way, a big drive is currently going forward to build carpets into a major market for nylon staple fiber. Some 20 carpet manufacturers are currently offering 100% nylon fabrics. But so far actual poundage of nylon consumed in this end use remains small. Most of the nylon going into floor coverings is in blends with rayon in tufted fabrics, with nylon not more than five or ten per cent of the blend. Weaknesses of all-nylon carpets, according to carpet manufacturers, are too great a tendency for the pile to mat down and soil faster than wool.

# NEWTRENDSIN

- tarpaulins are new market
- new textures in carpets
- tricot bedsheets gain





Further impetus to the increased use of nylon in carpets was provided in the spring by a new process developed by Industrial Rayon Corp. for obtaining a greater variety of textured effects in these fabrics. Industrial's process permits a greater variety of textured effects in nylon carpets by heat-setting a twist in the yarn. With this method popular hard twist and frieze textures can be imparted to all-nylon carpets as well as saxony and tipping effects.

The popularity of "modified" nylon yarns has continued to grow with stretch nylon yarns moving ahead into new end uses and crimped and textured yarns finding growing popularity in knit wear. Stretch socks for men, particularly when the nylon stretch yarn is blended with wool and cotton, have become virtually a staple product. For home knitters, stretch nylon yarns combined with wool were introduced along with instructions on how to knit them into a variety of garments. Stretch nylon also remained strong in men's and women's underwear. Ban-Lon, the Bancroft process for crimping nylon, showed increasing popularity in sweaters for women and children and also found use in girdles.

Taslan, Du Pont's process for lofting filament yarns, made gains into broader commercial use by appearing in a variety of fabrics including crepe de chine print cloth in combination with acetate and in tightly woven all-nylon poplins for such rugged uses as

children's snowsuits.

In the important field of tricot, this year's substantial cuts in nylon prices opened wide the door for nylon to move forward in fitted bed sheets. Demand for these sheets picked up considerably in retail stores to be followed almost immediately by sharp retail price competition which saw prices fall well below three dollars for a fitted twin bed bottom sheet. However, tricot knitters feel that if quality can be maintained for these sheets, nylon tricot has before it a big new market.

Recent months have brought new developments in the forms of nylon available. Among these was the appearance of solution-dyed black nylon offered by Du Pont initially in 200 denier, 34 filament count on standard bobbins at \$1.80 a pound. Also brought out by Du Pont was 40 denier 13 filament count type 680 nylon, filling out the denier range in this whiter form

of nylon introduced last year.

NYLON ON WHEELS—Neoprene coated nylon tarpaulins are finding wide acceptance as truck covers. They last longer, weigh less than cotton GOOD MIXER—Nylon is combined with cotton and wool in this new outfit for cold days on campuses NYLON INSIDE AND OUT—Warmth and ease-of-care are features of this nylon fleece jacket lined with quilted nylon. This coat is warm, light in weight and considered machine-washable

Another significant development in new forms of nylon was the appearance this year of nylon heavy yarns offered by Allied Chemical & Dye Corp. Available in a range from 2,000 to 50,000 deniers, these new yarns are said by Allied to be a completely new class of textile materials which eliminate the need to ply multiple ends of costly finer denier to achieve a total denier effect.

Allied also points out that its new heavy yarns make available in one class of yarn high strength, toughness, durability and excellent dye affinity for virtually all classes of dyestuffs. Allied is making these yarns available in a new 30 pound knotless put-up, said to be the largest filament nylon put-up available. The yarn is also available in ten pound packages.

The new heavy yarns are being used in upholstery, auto seat belts, tarpaulins, and in other uses where great yarn strength and dyeability are essential requirements. They are also being used in conveyor belt duck, webbings, rope, cords, seine twine and other uses where toughness and high impact strength are wanted.

Allied Chemical also entered recently upon commercial production of 560 denier nylon—a type which combines high tenacity with good dyeability. It has been finding ready acceptance in the upholstery and drapery field. The company also is coming into commercial production of its 200 denier Caprolan deepdye nylon. This fiber will shortly reach consumers in a knitted fleece fabric made up into washable toppers and coats for women.

#### WHAT'S AHEAD FOR NYLON

In industrial uses, auto safety belts, coated tarpaulins, sewing threads and tires will consume steadily growing poundages of nylon. In home furnishings, more nylon carpets will appear, eating into the present strong position of rayon. Also nylon's new lower prices will stimulate increased production and sales of nylon fabrics for slip covers.

Modified nylon yarns such as the Ban-Lon, Tycora and Taslan forms will grow in use in sweaters and a range of fashion fabrics. Nylon tricot bed sheets should provide a major outlet for hard-pressed tricot knitters if retailers do not persuade knitters to downgrade these items until consumer confidence is lost.



ORLON FOR THE WELL-DRESSED MAN—Orlon has been combined with wool in this soft two-tone herringbone suiting. Orlon contributes shape retention properties, cuts need for pressing

#### ORLON

N THE PAST 12 months, Orlon, Du Pont's acrylic fiber, has clinched its position as the most important of the newer textile materials to reach the public since nylon's great success. Orlon, largely due to its widespread use in knitwear, has reached a sales volume of about 60 million pounds a year, according to trade estimates. Du Pont is planning to expand its plant capacity by 40 million pounds in the near future. When this expansion is completed, probably by the end of 1958, Du Pont will have capacity for Orlon of 100 million pounds annually. Orlon's successful breakthrough into the hard-to-achieve position as a major textile fiber has helped to arouse interest in the profit potential of acrylic fibers and is probably a major reason why three new acrylics and one nearacrylic fiber are being pushed forward by other chemical companies.

Meanwhile, Orlon having got there "fustest with the mostest" has strengthened its position in women's, men's and children's sweaters where, according to informed industry observers, it is now the dominant fiber. By conservative estimates of sweater industry leaders, Orlon in 100% constructions accounts for

60 to 65% of sweaters knitted today.

Stimulated to greater research and marketing efforts by the knowledge that they have a winner in the new fiber sweepstakes, Du Pont people have worked hard recently to find improved ways of processing Orlon. They have also made some notable improve-

ments and additions to the fiber itself.

Tow dyeing of Orlon, for example, has been advanced to the point of commercial practicability. Tow-dyed Orlon has opened new end uses for the fiber in fancy knit bulky sweaters such as the jacquard-woven Scandinavian designs introduced by Huntingdon Mills. Tow-dyeing has also encouraged use of Orlon in new types of knitwear such as knitted coats, and in 100% Orlon woven fabrics such as tweeds. An example of Orlon tweeds is the line of basket weave and homespun type fabrics brought out recently and cut into women's spring coats by Sportleigh-Hall.

Another end use in which Orlon is making gains is blankets. The first blankets woven of 100% Orlon were introduced by Chatham Manufacturing Co. Advantages of these blankets are light weight, extreme softness, moth and mildew resistance and machine washability. In the 72 by 90" size in white, these

blankets retailed at about \$20.

New forms of Orlon recently introduced by Du Pont include solution-dyed black staple; an improved high shrinkage staple; more uniform lower shrinkage regular staple; new, heavier deniers, 4.5 and 6.0 per filament in staple and tow. Also Orlon in 10.0 denier per filament is now in commercial evaluation with 15.0 denier to follow, while 1.0 denier per filament is being sampled for broadcloths and lawns. Expected in the near future is an improved whiter, more dyeable fiber. Production of filament Orlon was recently discontinued, but may be restored in the future if this form of the fiber is improved to make dyeing easier.



# ACRYLICS

- three new fibers appear
- orlon expansion planned
- acrilan in new end uses
- dynel finds new markets

#### ACRILAN

CHEMSTRAND CORP., Acrilan's producer, is hopeful that coming months will see important gains for its acrylic fiber, a reward for the vigorous promotional drive the company has been conducting in recent months. Among major new developments for Acrilan have been important gains in jersey fabrics in 100% constructions.

An increasing number of knitters are offering Acrilan jerseys in many weights in a variety of patterns and colors including bold bright stripes, tweed patterns and novelties. Acrilan's acceptance in jerseys has been helped by the fact that garments made with Acrilan jersey do not stretch or sag and thus retain their fit through long wear. Another advantage of Acrilan jersey, particularly important in children's wear, is that garments can be washed by machine. This fall, Acrilan jersey fabrics will be widely used in children's wear, men's sportshirts and women's blouses, dresses and separates.

Acrilan is being used currently in blankets, and this end use will gain in the coming winter. Acrilan home washable blankets produced by a number of well-known mills will be available in twin, double bed

and crib sizes.

Other markets in which Acrilan is making progress



are men's suits, slacks, and dressing gowns and women's slacks and skirts.

Meanwhile, Chemstrand, in connection with its interest in emphasizing the "wash-and-wear" qualities of Acrilan, has worked out and widely publicized a definition of "wash-and-wear" garments which, it feels, is of great value to garment manufacturers and consumers. Chemstrand's definition: "A wash and wear garment is one that can be washed by and /or in a washing machine at the warm water setting. When drip-dried, it retains its crease or pleats, and recovers sufficiently from wrinkles to need little if any ironing."

Chemstrand believes that this forthright and precise definition of "wash-and-wear" apparel does much to prevent damage to consumer confidence by extravagant claims. In coming months Chemstrand can be expected to push Acrilan forward vigorously into new markets. To do this the company is sponsoring the new network TV show "High Finance," which will appear on Saturday nights on 74 stations of the CBS net.

#### DYNEL

Capacity production and a steadily sold-up position in recent months has marked this fiber which is still produced in a pilot plant operation with output generally believed to be no more than seven or eight million pounds annually. Dynel differs from Orlon and Acrilan in having a smaller content of acrylonitrile. It is generally described by technical men as being a copolymer of acrylonitrile and vinyl chloride while Orlon and Acrilan are said to be polymers of acrylonitrile alone.

Although Dynel's output is relatively light, the fiber has found acceptance in a growing number of end uses where its special properties have enabled it to do a better job than other fibers. In the past 12 months Dynel has appeared in a number of promising new applications, and these new gains give it renewed promise of eventual stature as a major man-made fiber.

Deep pile fabrics that resemble furs continue to be the outstanding success of Dynel. Blended with Orlon and sometimes with other fibers, Dynel pile fabrics are being produced in a greater variety of pile heights and textures. In the coming winter coat season, for example, there will be far more women's coats of deep pile fabric made with Dynel than in the past  ACRILAN KEEPS HER WARM—The young lady is wearing a blanket of 100% Acrilan, machine-washable and available in a wide range of colors

season, and the coats themselves will be offered in a greater variety of styles. Encouraged by the success of mills such as Princeton Knitting and Borg Fabrics which were among the first to bring out Dynel-Orlon fur type coatings, more mills are manufacturing these fabrics including Malden, Alamac, Sidney Blumenthal, Collins & Aikman, and La France Industries.

Another new coating fabric made with Dynel is a 17 oz. fleece of Dynel blended with beaver fur fiber by Paraco Woolens, Inc. Also in the field of fashion, a fabric has been introduced containing 30% Dynel 70% cotton in a linen type weave that is washable, pleat retaining and crease resistant. Dynel "straw" hats, introduced last spring by Frank H. Lee Co., proved to be extremely successful. Advantages of these hats, made with a fabric woven by Wellington Sears, are light weight, great resistance to crushing and to rain. For the summer of 1957, production of these hats is being greatly increased, and it is expected that at least three more hat makers will offer them to consumers.

Introduction of Dynel Type 63, a new high bulk form of the fiber opened new possibilities for Dynel in blends with cotton, especially in knit goods such as underwear, children's sleepers, and T-shirts. The high bulk Dynel is said to give greater cover, softer hand and more warmth with less weight. In work clothing, Dynel's outstanding resistance to acids and other destructive chemicals caused the fiber to be used in 100% Dynel constructions in uniforms made specially for workers in chemical plants. Dynel with a vinyl backing made its appearance in a new blanket intended especially for boatmen, campers and picnickers.

Dynel's toughness and resistance to acids and other destructive materials has also made gains for the fiber in industrial uses. Among the latest are fender cloths to protect autos being repaired from battery acids. Another new use is railroad car diaphragms shielding the spaces between cars. Other interesting industrial uses of Dynel are a new non-woven material developed by the Felters Co. made up of multiple webs of Dynel bound together to form a resilient sheet which can be made in various thicknesses, densities and surface textures. Dynel in overlays on either or both sides of glass-reinforced low pressure laminates are being used to improve resistance to both chemicals and abrasion. For sea going tankers, Dynel as the warp and saran as the filling have been combined in draperies with outstanding resistance to fire and the destructive effects of sunlight, salt air and dampness.

#### CRESLAN

CRESLAN, the long-postponed acrylic fiber of American Cyanamid Co., may soon be something that millmen can see, touch and weave into fabrics. American Cyanamid is going to build a plant near Pensacola, Fla., with an initial annual capacity of 27 million pounds and a 100% expansion potential embodied in the original design. Limited quantities of the fiber will be available toward the end of 1956 from the company's pilot plant at Stamford, Conn. The Florida plant is expected to be in production by the second half of 1958.

Creslan is reported to have outstanding dyeing properties especially when combined with wool. It is said that a wide range of dyes will dye Creslan and wool to the same shade in less than two hours using standard dyeing equipment without the need of pres-

sure equipment.

American Cyanamid plans to steer the fiber to those end uses where the company believes it can function especially well. Initially, it is expected that such end uses will be knitwear, blankets, and wool-type fabrics particularly fabrics with brushed, napped and pile surfaces.

#### DARLAN

Described by its producer, B. F. Goodrich Chemical Co., as a "dinitrile" fiber, Darlan is generally regarded as being chemically similar to the acrylics and appears to possess many properties found in acrylic fibers. Its basic constituent is vinylidene dinitrile. According to Goodrich, Darlan is a very soft fiber, but possesses outstanding resilience. It has a tenacity between 1.5 and 1.75 gpd, an elongation of 30% or greater and a softening temperature of about 350°F. It retains a "significant" portion of its strength and is dimensionally stable at 320°F.

Darlan is a low moisture regain fiber and therefore requires a certain amount of static control. Its density is among the lowest of the fibers. Goodrich says that the fiber's resistance to weathering, prolonged exposure to heat, mildew, insects and acids is greater

or better than most other fibers.

With regard to flammability, Darlan fiber or fabrics have an ease of ignition and rate of flame travel similar to untreated cotton, acetate and viscose rayon. Darlan fabrics melt-burn. Apparent ignition temperature is 892°F

In dyeing this new fiber, pastel shades may be produced using disperse dyestuffs. Either disperse or cationic dyes with a carrier yield medium or deep shades. The fiber has a limited affinity for vat, solubilized vat and selected acid dyes, the latter when applied by the cuprous ion method. Darlan cannot be dyed with direct, acid, metalized or chrome dyestuffs.

Darlan is in "semi works" production at Goodrich's plant at Avon Lake, Ohio. So far it has been used only in deep pile fur-like fabrics produced by the George W. Borg Co. and sold in coats in very limited quantities.

#### VEREL

Offered by its manufacturer, Eastman Chemical Products, Inc., as a "modified acrylic fiber," Verel was announced this year to be in pilot plant production and available as staple fiber in limited quantities. It is said to have the desirable properties of soft hand; ease of dyeing; high resistance to flammability; white color in its natural state; controllable shrinkage, and excellent chemical resistance along with higher moisture content than other acrylics.

Verel is offered in three forms. The first of these, regular Verel, is said by Eastman to be suitable for most flat fabrics. Type I Verel is being offered to the trade as a medium shrinkage fiber suited for liners, toy fabrics, collars and cuffs as well as backing yarns for man-made fur-like fabrics. Type II Verel is said to provide high shrinkage desirable in such end uses as high bulk sweaters, jerseys and a variety of other applications in apparel and industrial applications. (For a full report of this fiber see our April issue, page 33).

WHY NOT FUR COATS FOR MEN?—Pile fabrics of Dynel-Orlon, having made a big success in women's coats, are now moving into the menswear field. This coat retails for \$125 making it possible for even father to have a fur coat

#### DOW'S NEW FIBER

The latest new fiber to be announced is "Zefran" and its proud parent is Dow Chemical Co. Said to be a "nitrile alloy' Zefran will be produced in a plant to be constructed at Lee Hall, not far from Williamsburg, Va., at a reported cost of \$15 million. Completion is expected in 18 months. Arthur E. Young, formerly in Dow's plastics department, has been appointed manager of a new textile fibers department formed to handle Zefran production and sales.

#### EXPECTED ACRYLIC DEVELOPMENTS

EXPECT both Orlon and Acrilan to appear in increasing yardages of men's suitings and topcoatings in blends with wool. Expect to see as much Orlon in men's sweaters as you see today in women's sweaters. Helped by Chemstrand's vigorous promotional effects, Acrilan will also gain in sweater use, both men's and women's.

The Paris inspired style of long torso sweaters and knitted coats for women will gain ground in coming months with Orlon furnishing the fiber. In women's sweaters Orlon blended with natural fur fibers will be a new fashion trend this fall and winter.

Acrilan and Orlon will be increasingly used in jersey fabrics. Because of the washability and shape retention these fibers give jersey apparel for women and children, they may spark a growing trend for increased popularity of such garments. Watch for an entirely new development: Orlon combined with cotton initially in oxfords and lightweight flannels, softwoven sport shirt and robe fabrics and in dress fabrics such as challis.

Expect Acrilan to make a notable showing in blankets helped by the big medicine of network TV. Orlon, too, will make gains in this fiber consuming end-use. Watch for greater use of Orlon in men's socks, and its penetration into heavier draperies.

Dynel will continue strong in fur-like pile fabrics in combination with other acrylics. Expect to see these fabrics used increasingly in men's coats and as linings for a wide variety of men's winter leisure garments where they will replace shearlings. Expect to see Dynel gain in wool-Dynel flannel suitings; in cotton-Dynel underwear and sleepwear; in Dynel "straw" hats; in many specialized industrial uses.

In coming months watch for Verel's first commercial appearance in knitwear, woven apparel and industrial fabrics.





# POLYESTERS

- better dacron-cotton styling
- fiberfill uses increase
- terylene output climbing

#### DACRON

IN THE FIRMAMENT of textile fibers, the star of Dacron, Du Pont's polyester, is shining brighter every month. As this report was going to press, Du Pont underlined the general feeling that Dacron was coming along fine by announcing plans to expand production capacity by 25%. The new equipment added at the Dacron plant in Kinston, N. C., should bring Du Pont's ability to produce this fiber well above 43 million pounds annually.

Like love and marriage, Dacron and cotton continue to go well together. An increasing variety of fabrics combining Dacron and cotton came on the market especially in womenswear. Among these are yarn-dyed checks and novelty plaids for women's dresses, blouses, sportswear and for men's shirts such as the new Format line of Fabrex Corp. Another important new development in Dacron-cotton is a group of fabrics woven with a 30 denier filament nylon warp and a spun Dacron-cotton filling. In woven lingerie and in batistes this construction, produced by a number of mills, is one of the most promising developments in Dacron-cotton. Dacron gives crease resistance, nylon high strength and cotton lends its absorbency and softness. End uses where this fabric has made good initial impressions are slips, blouses, men's shirts and shorts.

COMFORTABLE COMFORTER—Filled with 100%

Dacron Fiberfill, this comforter is warm, light in weight, and strongly resistant to matting

Other new uses of Dacron in fashion fabrics are a Dacron and bemberg rayon sheer crepe which is washable and crease-resistant recently introduced by Beaunit Mills. Beaunit has also combined Dacron and nylon in a brushed fabric with a soft fleecy surface for negligees and dresses. The same mill has a new circular knit Dacron fleece with outstanding ease-of-care properties which will appear next spring in toppers and longer coats.

Meanwhile, Dacron in the form of fiberfill has been finding growing acceptance as a material for pillows, comforters and upholstery. For pillows, Du Pont has encouraged minimum weight standards by providing labels for manufacturers whose pillows conform to these standards and by backing Dacron fiberfill in pillows by extensive advertising. Properties of fiberfill which make it useful in pillows—resilience, light weight and washability has caused this material to break into the comforter field where it is used in the

first electric comforter ever offered consumers.

Another great success achieved by Dacron has been in marquisette curtains, and this success is reported growing. Ease-of-care, durability and good looks are the properties which have helped Dacron in this end use. To further increased consumption of Dacron in sheer curtains, Du Pont this year started a quality control program under which labels are given to manufacturers whose curtains meet or surpass Du Pont's minimum standards. These call for use of 100% bright Dacron yarns with a finished count of  $52 \times 34$  threads per inch or higher. Du Pont has utilized an independent laboratory to follow up on the program and insure proper use of the label.

#### WHAT'S AHEAD FOR DACRON

In the months ahead expect to see Dacron-cotton blends with smarter styling, largely in yarn-dyed constructions. Expect more Dacron-cotton-nylon batistes and other lightweight fabrics especially in pajamas, nightgowns and robes for women. In a general way, expect next spring and summer to see greatly increased popularity of all-types of dacron-cotton fabrics in light weight wash-and-wear garments.

Dacron marquisettes will gain in consumer demand aided by the Du Pont's quality control program. A new marquisette fabric woven by Seneca Textiles using 140 denier 28 filament continuous filament yarn instead of the usual 70 denier 34 filament yarn has recently been introduced and is highly regarded by the trade. The heavier yarn, which is given a high twist, results in a curtain with greater crispness and fullness giving an overall effect of greater luxuriousness.

In industrial end uses, expect to see Dacron combined with cotton make substantial inroads in the important municipal fire hose market, and in the 100% form in hose for chemical use. Expect more Dacron to go into conveyor belts and V-belts where its lighter weight with equivalent strength permits designing of smaller, lighter machines.

PERMANENT PLEATS—Dacron and cotton combined in a light batiste makes this dress washable, easy to pack and retentive of its pleats

#### TERYLENE

Terrlene is a polyester fiber similar to Dacron and is produced in Canada by Canadian Industries, Ltd., after having been originally developed in England by Imperial Chemical Industries, Ltd. A new plant at Millhaven near Kingston, completed early this year, is now in full production. Capacity is 11 million pounds of filament yarn, staple fiber and tow.

As output has increased, Canadian Industries has promoted Terylene filament yarns for wash and wear garments such as blouses and shirts. Nurses' and professional uniforms which require washability and quick drying have been particularly suitable applications. Among end-uses for staple, light-weight suitings of Terylene blended with wool are being successfully marketed. Men's hosiery, using either filament stretch or spun staple yarn, is being made by an increasing number of knitters.

Terylene fiberfill is a highly resilient material for filling comforters, pillows, sleeping bags and other quilted goods. Sales for this use have grown over the past year.

In the industrial field, Terylene is being carefully evaluated in a number of promising end uses. Use of the fiber in fire hose has expanded rapidly owing to its good stretch resistance, abrasion resistance and strength. These properties also make Terylene useful in ropes and fishnets, which were successfully introduced during the past year. Papermakers' felts and filter fabrics used in the mining industry also promise to become important outlets.



#### OUTLOOK FOR TERYLENE

Over the next twelve months it is expected that blends of Terylene and cotton will represent a major outlet in a wide range of wash and wear apparel. Blends of Terylene and viscose will find increasing applications in slacks, rainwear and sportswear. Terylene and worsted blends for suitings, skirts and slacks will be marketed on a broader scale. Major developments are foreseen for the drapery and upholstery fields.

In industry, this fiber will find many new uses, including tarpaulins, awnings and tents, laundry and dye bags, conveyor and other belting, and electrical insulation tapes.

# METALLICS-GLASS-SARAN & others

#### METALLICS

METALLIC yarns continue to be a lively and expanding area of textiles with new product improvements and new applications coming in a fast-moving flow from the few companies that make these glittering materials. Use of Mylar, Du Pont's polyester film, as the protective surface of these yarns, first introduced last year, has enabled metallic yarns to push forward into new end uses formerly closed to them.

Metallic yarns are made by two ways: the first is to laminate bright aluminum foil between two layers of plastic film, either acetate butyrate or Mylar. The second is to deposit the aluminum on the film in a vacuum chamber by a process that is roughly analogous to electro-plating metals. This second process is called "metallizing" and has the advantage of producing yarns said to have greater glitter than the laminating process.

Metallic yarns made with Mylar are stronger and

WASHABLE METALLIC YARNS—Metallic yarns made with Du Pont's Mylar withstand heat and laundering wear. They are being used more and more to give glamor to towels and other utility fabrics



are not damaged by dyeing and bleaching at the boil or, when in use, by ordinary laundering procedures. They have greater strength also which enables them to be used without supporting yarns in many cases, and to be run on standard textile processing equipment including high speed knitting machines.

Because of these properties, metallic yarns made with Mylar are rapidly finding their way into a growing diversity of fabrics as a decorative and styling element. In the past year they have been adopted widely by carpet weavers and tufters; they have continued to find an important use in upholstery fabrics for autos, and they have made new gains in linens and domestics. A number of major producers of towels this year brought out luxury items lavishly decorated with metallic yarns made with Mylar.

Another important use for metallic yarns are furniture upholstery where they are gaining in popularity. Meanwhile they continue to be widely used in better types of draperies, in table linens and in high fashion fabrics, in party shoes and purses for women. Unsupported metallic yarn made with Mylar has been successfully tried as a warp yarn and this development promises a variety of new applications to come in the future.

In keeping with the favorable outlook for metallic yarns, Dobeckmun Corp., the largest producer, expects to expand output by 30% at a new plant in Cleveland. Metlon Corp., another large producer, is currently completing installation of new equipment which will double its output. In the spring, a third important producer, Standard Yarn Mills, Inc., began operations at a new plant which increased the company's capacity by 35%. Two other producers of metallic yarns, Fairtex Corp. and Multi-Tex Products Corp., also report good demand for their yarns.

#### WHAT'S AHEAD FOR METALLICS

Expect to see the glitter of metallic yarns in many surprising places. Floor coverings, bath mats, towels will use more of these yarns. They will be used to an increasing extent in circular knit goods, especially in the metallized form, and these knitted fabrics will be cut into a wide range of fashion apparel. Expect to see metallic yarns combined with other fibers to produce interesting novelty effects such as the new combination of Metlon yarn with American Enka's Jetspun solution-dyed rayon. Expect to see more metallic yarns in an entirely new development—combined with various plastics such as hard surface floor cover-



ings, table tops, lamp shades, wall coverings, shower curtains, clothes hampers.

#### **GLASS FIBERS**

AFTER the cellulosics and nylon, glass fiber (78 million pounds produced last year) is the most important of the man-mades poundagewise. But in terms of conventional textile applications, use of glass fiber is still limited. Curtains and draperies remain the major end use in which these fibers are bought by consumers. They have many other uses, but they are largely specialized industries applications many of them on the borderline of textiles.

In the past year a vigorous effort has been made to re-establish glass yarns in the sheer curtains market by Owens Corning, one of the leading producers, and by such leading weavers as Hess, Goldsmith. Curtain manufacturers and retailers report that the effort is succeeding. Today glass fiber curtains are said to be close behind Dacron in popularity with home makers.

Printed glass draperies have also been promoted strongly in recent months, and the range of textures, colors and print designs in these fabrics is increasing. Hess, Goldsmith reports that last year it developed and placed at the disposal of curtain manufacturers and drapery converters as many as 45 different novelty fabric designs for glass fabrics. As a result of this development effort, 18 converters have prepared more than 100 different novelty designs to reach consumers this fall.

Insect screening, introduced a few years ago, has grown as a use for glass filament yarns. Among the advantages of glass screening are the ability to resist exposure indefinitely even in humid regions, and the fact that it does not shrink, stretch, stain, corrode, or burn.

A new use for glass fiber fabrics offered this year was women's shoes. The same fabric, which is easy to clean and has a deep sparkling effect, can be used in other women's dress accessories such as handbags and belts.

In industrial uses, recent noteworthy developments have been the introduction of glass-Dacron yarn as an abrasive-resistant insulation which adheres readily to copper. Designed primarily for magnet wire this yarn is also used for aircraft electrical cable construction and for sleeving and tubing. Also recently introduced has been Teflon-coated glass yarn said to possess superior abrasion resistance.

Increasing quantities of glass fiber yarn and scrim (open mesh cloth) continue to be used for reinforcing industrial paper and tape. One promising new development in this field is a disposable mail bag made by Bemis Bro. Bag Co. using Scrimtex, a paper made by Mosinee Paper Mills. In tests conducted by the U. S. Post Office, these mail bags are said to hold up well under temperatures ranging from minus 66°F. in Alaska to 200° in the holds of ships.

Meanwhile, in one of glass fiber's established industrial uses, increasing amounts of woven glass fabric are being used as reinforcement for plastic materials. One of the new developments in this field are glass-reinforced electric and sign poles, light in weight, strong and resistant to effects of exposure. As an electrical insulation material more woven fiber glass fabrics and tapes are being used.

YOU CAN DROP THIS GLASS—Paper reinforced with a glass fiber scrim cloth is being used in mail sacks and stand up well under any temperature

 PRINTED GLASS FABRICS—These curtains are made of a printed boucle weave glass fiber fabric

Progress in this end use has been aided by the recent introduction of a new low-cost staple glass fiber by Owens-Corning. Known as bonded staple fiber, the new fiber has increased bulk combined with strength for weaving and braiding. It consists of glass fibers varying from 8 to 15 inches bonded with a polymerized oil. When not subject to compression, the bulk is about 50% greater than equivalent glass fiber staple yarn and more than 100% greater than continuous filament. Cloths woven of the new staple are expected to have uses in the electrical and other industries wherever bulk is desirable.

#### SARAN

**D**URING recent months, this fiber, a co-polymer of vinylidene chloride and vinyl chloride characterized by exceptional toughness and abrasion-resistance, has gained as a monofilament in coverings for outdoor furniture. As staple fiber used in spun yarns it has pushed forward in upholstery fabrics used on ordinary furniture.

These promising upward trends in saran's use have helped to compensate for decreased consumption in one of the fiber's biggest markets—auto seat covers where it holds an estimated 50 to 60% of total sales. However, producers of saran monofilaments expect that it will regain its lost business in seat covers during the coming 12 months. Saran also enjoys considerable use as seat fabrics installed as original equipment in trucks and station wagons. In these fabrics, saran is sometimes used as the warp with rayon filling.

As staple fiber, saran is being used in attractive furniture upholstery cloths and this use has been growing as was evident in the Chicago Home Furnishings Market earlier this summer. A variety of colorful and roughly textured weaves have been offered by leading producers of upholstery fabrics. In some of these fabrics monofilament warps are combined with spun fillings and metallic yarns are added for their colorful effect. Advantages of saran, which are expected to help this fiber grow in furniture upholstery, are long wear, great ease of cleaning.

In industrial uses and other specialized applications, saran continues to enjoy good markets in filter cloths, rope, vacuum cleaner hoses, insect screening and agricultural shade cloth. The fiber also continues to maintain its dominant position in the doll hair and manikin wig field where its fire resistance is important (saran softens and chars but will not support combustion.)

#### WHAT'S AHEAD FOR SARAN

Furniture upholstery fabrics is one of the most promising new end uses for this fiber and in this field the volume potential is huge. Expect also to see saran continue its rapid gains in outdoor furniture especially in the light aluminum type where saran tapes are used for seats and backs. In auto upholstery there is a likelihood that the fiber, combined with nylon, will find renewed use. Saran can be expected to hold its own in the auto seat cover field and perhaps gain new ground as the public tires of other materials such as clear plastic covers.



#### VICARA

Shaping-up for this protein fiber made from zein, a corn derivitive, is a renewed effort to find volume markets in a variety of textile applications. Vicara's manufacturer, Virginia-Carolina Chemical Corp., has had its staff of textile technicians working hard in recent months to develop sample fabrics which make advantageous use of Vicara's extreme softness and friendly compatibility in blending. Many of these fabrics have been taken up by mills and placed in production. It is expected, therefore, that quite a few of them will be reaching consumers in apparel in coming months.

Most of these new fabrics blend Vicara with wool in standard woolen and worsted constructions. In woolens, for example, there is a promising flannel combining 65% wool with 35% Vicara, characterized by an extremely soft hand and intended for separates and skirts. It is produced by Talbot Mills and is priced at \$2.75.

Another new fabric representative of how Vicara is being skillfully combined with wool is a topcoating by Crown Woolen Mills in a smart hound's tooth pattern. In this fabric the contribution of Vicara is said to be greater softness and improved drape.

In worsteds, Vicara has been blended with wool in shetland topcoatings and herringbone suitings for men. In these fabrics again, the contribution of Vicara is said to be a softness and luxuriousness usually found in far more expensive all-wool cloths.

Among the man-made fibers, Vicara is being combined successfully in tropical suitings of 50% Vicara and 50% Dacron. Garments made with these fabrics are said to have freedom from pilling and increased moisture-absorbency. Vicara is also being blended with Orlon on a 50-50 basis for women's suits and slacks.

Another blend said to have great attractiveness is a fabric combining 50% cotton, 25% Vicara and 25% rayon. This fabric has been produced in soft plaids and also in piece-dyed solid colors and prints. It has been successful in men's sport shirts and robes and in women's skirts.

In knitwear, Vicara has been combined with Orlon on a 50-50 basis in circular knit jerseys by Alamac Mills. The zein fiber shows promise also in socks, gloves and sweaters when combined with stretch nylon yarns. In the fast-moving field of fur-like pile fabrics, Borg has brought out an interesting fabric knitted of Vicara and Dynel with two heights of pile mixed together; the longer "guard" fiber is Vicara.

In sweaters, long a major field for Vicara activity,



the most recent developments are a bulky knit garment made with 60% wool and 40% Vicara and a sweater which blends Vicara, Orlon and fur.

#### **TEFLON**

This tetrafluoroethylene fiber produced by the Du Pont Co. has found acceptance in recent months in a pioneering industrial use where its extremely high heat and chemical resistance are advantageous. A fabric of Teflon is being employed by American Metal Products Co. to face metal suspension joints for autos.

The Teflon fabric is backed with phenolic material, molded in assembly, coated with a special grease to prevent corrosion and then the joint is sealed. Preliminary testing indicates that the joint will last the lifetime of an auto without lubrication or other maintenance. Use of Teflon for this purpose is said by Du Pont to reduce friction by more than 50%.

Other uses for Teflon, which is available as staple fiber, tow and continuous filament, are fabrics, cords, and braided structures for pump and valve packings; filtration of corrosive liquids and gases; electrical and thermal insulation, and chemical processing diaphragms and gaskets. Teflon is also available as a resin



SOFTER SPORTS COATS—Vicara blended with wool gives this sports coat fabric the softness of cashmere at a moderate price. Crown Woolen Mills wove the fabric, Seinsheimer & Co. made the coat

#### POLYETHYLENE

Called by one authority the Cinderella of the newer fibers, this year polyethylene appeared at last to have been found by its Prince Charming. The prince appeared in the form of new uses for polyethylene's special property of shrinkage which caused at least three companies to bring out interesting "three-dimensional" fabrics. These were achieved by using polyethylene yarns in the warp and various natural and synthetic yarns in the filling. When immersed in boiling water, the polyethylene shrinks in a way that creates a very marked raised surface effect of the seersucker type.

Among the producers of these fabrics are U. S. Rubber, Collins & Aikman and Bates Manufacturing Co. Major use so far has been upholstery, where the fabric has a cushioning effect. Other promising applications are draperies, bedspreads and carpeting.

Although many persons in textiles have only recently become aware of polyethylene fibers, they have been available for more than ten years. Originally, the polymer used was conventional polyethylene of the so-called high pressure or low density type. Considerable progress was made in the use of polyethylene when Reeves Brothers, Inc., introduced several years ago "Reevon" polyethylene filaments with a tenacity 50% higher than earlier available yarn and considerably improved resistance to ultra violet degradation. This new development led to practicable end uses such as filter fabrics, ropes and the three dimensional fabrics described above.

Early this year, another important advance was made in polyethylene. Reeves introduced new linear, low-pressure, high-density polyethylene filaments which are said to be stronger than saran and up to the range of nylon. Their softening point is beyond the boiling point of water and their dimensional stability up to this temperature considerably better than conventional polyethylene filaments. These new developments are expected to permit production of fabrics of unusual resistance to surface abrasion and thus lead to enlarged markets in industrial and other textile uses.

#### WHAT'S AHEAD FOR POLYETHYLENE

Expect to see more of the "three dimensional" fabrics woven with this fiber in many uses outside of upholstery. Expect also to see the new linear polyethylene filaments open new end uses for this material in seat covers, heavy duty upholstery fabrics and in ropes, braids, and filtration cloths as well as other strenuous industrial uses. Expect also to see other companies bring out new linear polyethylene filaments and don't be surprised if the pioneering work of Reeves Brothers in this field leads to further new developments including a new polypropylene fiber.

SOFTER SEAT—The young lady's ride is cushioned on a new "three-dimensional" upholstery fabric made with polyethylene as an ingredient yarn

# U. S. PRODUCTION OF MAN-MADE YARNS

#### An Annual Survey

Compiled by

H. Geo. Janner

Managing Editor, Modern Textiles Magazine

#### Part 1 - Filament Yarns

WHILE there have been no radical changes in the yarn production since publication of our last survey, September 1955, a careful study of the present Survey shows many changes, especially in the acetate and non-cellulosic groups. In addition, two new fibers, Darlan and Verel have augmented the already long list of man-mades. Comparatively few yarn types have been discontinued.

All these changes have been carefully checked with the various yarn producers and are incorporated in the Tables on the following pages. The Tables list the producers, the denier and filament numbers of the yarns in current production, and the process, type and quality of the yarns. The yarns have been grouped in cellulosic and non-cellulosic types. The cellulosic yarns, Rayon and Acetate, are shown in Tables 1 and 2, Table 1 listing the Regular Filament yarns and Table 2 the Intermediate and High-Tenacity varns. Table 3 comprises the Non-Cellulosic yarns, including the Glass fibers. Table 4 lists the Staple Fibers and Table 5 the available Tow. The deniers of Glass fibers, it should be noted, are only close approximations, since theoretical yardages are used and the resultant figures rounded out to the nearest even number.

While these Tables present a complete picture of the current yarn production and will again be valuable for fabric designers and textile technicians, the following summary shows at a glance what changes have taken place.

#### Cellulosic Yarns

#### Rayon

E. I. DU PONT DE NEMOURS & Co. has added two new yarns: 150/100 dull and 300/30 No. 77 bright and dull.

NORTH AMERICAN RAYON CORP. added the following yarns: 125/60, 150/60 and 150/75.

Skenandoa Rayon Corp. added a 450/120 type yarn to its line.

AMERICAN BEMBERG is offering its yarn in either reel or spool spun.

AMERICAN ENKA CORP. added a 75/60 yarn and discontinued its 100/100 type.

#### Acetate

Celanese Corp. of America has augmented its line of acetate yarns by adding a 100/13, 150/20, 300/50, 600/13, and 900/20 yarn, all bright and dull. In addition 2400/120, 3000/160, 3200/160 and 4000/200 are offered in bright luster.

Their Arnel triacetate line has been increased by the addition of the following yarns: 50/15, 55/15, 120/32, 450/120, and 600/160, all in bright and dull.

Du Pont added the following yarns: 75/8 bright and dull, zero-twist tubes; 100/11 bright and dull cones and zero-twist tubes; 100/24 semi-dull; 300/40-80, 900/44-70, 1800/88, 2700/132-210, Type 20; 900 denier and up packaged on beams. Also the following experimental counts: 100/32, 150/40, 200/64 Thick and Thin yarns, bright, dull and color-sealed.

Discontinued were: 35/13 bright and dull, 45/15 and 55/24 color-sealed; and 600/80, 800/40, 5400/420, 200/248 color-sealed and bright and dull.

Eastman Chemical Products, Inc. has considerably extended its line of acetate filament yarns, as shown in Table 1, and has added among others a line of Lofted Estron and Chromspun yarns, in bright and dull, in 170, 230, 350, 720, 1080, 2700 and 5300 deniers. Their Chromspun color line has been expanded to 25 colors. They also offer a 150/7 Estron Crystal yarn and the same type in Chromspun, available in all colors.

#### Intermediate and High-Tenacity Yarns

AMERICAN VISCOSE changed its 1900/980 high-tenacity yarn to 2200/980.

Du Pont added 1650/1100, 1800/1100, 2200/1440, 2400/1440 type 272 yarns, sold under the tradename "Super Cordura".

INDUSTRIAL RAYON CORP. discontinued its 2700/300 yarn and is producing the 3300 denier yarn in 1440 filaments.

#### Non-Cellulosic Yarns

#### Nylon

Du Pont reports the following additions to its regular nylon line: 80/68, 100/50, 420/68, 2520/420, and 5040/840; a new Type 680 improved dull yarn is available in 15/1, 20/7, 30/10, 40/13, 50/17, 70/34, 100/34, and 200/34. A color-sealed black nylon was introduced in 70/34 and 200/34; a new line of heavy monofilament nylon yarns in 100, 200, 380, 450 and 600 deniers was added; also an improved heat-resistant, high-tenacity nylon tire yarn in 840/140. 15/1 and 40/13 yarns are now offered on tricot beams. They dropped the 200/26 yarn.

AMERICAN ENKA is using the tradename "Nylenka" for its Nylon 6 polyamide yarn produced at its Enka, North Carolina plant. They are now offering 15/1, 30/6, 40/8, 50/13, 70/24 and 100/32 in semidull and 200/34, 210/34, 260/16, and 840/140 in bright luster.

ALLIED CHEMICAL (National Aniline Division), producing Caprolan deep-dye nylon at its Chesterfield, Va. plant, has discontinued types 70/32 and 210/32 and has added a 560/32 yarn.

TABLE 1

# Deniers and Filament Numbers of U. S. Filament Rayon and Acetate Yarns

| Producers                                  | 40 45 50                              | 55    | 99 09    | 75                                      | 100                           | 120 125  | 150      | 0 170               | 00 200                           | 0 230  | 240 250                                 |        | 300 35                                 | 350 400  | 450              | 909                  | 720 9 | 1 006                               | 080 110                  | 00 180  | 1080 1100 1800 2000    |                | 2200 2400  | 2700   | 3000         | 5300     | Brand Names   |
|--|---------------------------------------|-------|----------|---|-------------------------------|----------|----------|---------------------|----------------------------------|--|---|--------|--|----------|------------------|----------------------|-------|-------------------------------------|--------------------------|---------|------------------------|----------------|--|--|--------------|----------|---|
| RAYON<br>American Viscose<br>Corp.         | 20                                    | !     | 10       | 30                                      | 40-60                         | 20       | 40       | 09                  | 44                               | 1.7  |   | 60 4   | 44                                     |          | 100              | 30-100               | 10    | 100-60                              |                          |         | 1.1                    |                |  |  |              |          | Avisco, Bri., Dull &<br>Semidull  |
| E. I. du Pont<br>de Nemours                | 20                                    |       |          | 15-30                                   | 15-40                         | 20       | 96       | 09-06               | 35                               | 0  |   | 30.    | 30-50                                  |          | 100              | 96                   | 111   | 144 50                              | 240                      | 100     | 480                    | Also           | Also 5400/300  | 150  |              |          | Bright<br>and Dull<br>Thick and Thin  |
| Industrial Rayon                           |                                       |       |          |   | 40                            |          |          | 40                  | 20-40                            | 01   |   | 44     | 80                                     | 11       | 09               | 06                   | 50    | 50-150                              | 11                       |         |                        |                |  |  |              |          | Bright<br>Semi-dull Luster #4   |
| American<br>Enka Corp.                     | E .                                   | 111   |          | 18-30                                   | 40-60                         | 50       |          | 90                  | 40                               |  | 111                                     | 60 50  | \$0-60                                 | 111      | 120              | 120                  | 111   | 120                                 |                          |         |                        |                |  |  |              |          | Briglo, Periglo,  |
| No. American<br>Rayon Corp.                |                                       |       | 111      | 30                                      | 40                            | 52       |          | 42<br>60<br>75      |                                  |  |   |        | 75                                     |          |                  | 86                   |       | 46                                  |                          |         |                        |                |  |  |              |          | Bright,<br>Xtra-dul   |
| Skenandoa Rayon                            |                                       |       |          |   | 11                            |          |          | 40                  |                                  |  | 11                                      | 21     | 20                                     |          | 120              | 86                   | 1     | 150                                 |                          |         | 11                     |                |  |  |              |          | Bright,<br>Veri-Dul   |
| Celanese                                   | 11                                    |       |          | 30                                      | 40-60                         |          | 400      | 06-                 |                                  |  |   | 2 09   | 05                                     | 11       | *120             | 11                   |       |                                     |                          |         |                        |                |  |  |              |          | Bright<br>Dull<br>Thick & Thin*   |
| New Bedford<br>Rayon Co.                   |                                       |       |          |   | 40                            | 11       | also     | 40<br>40<br>o Monof | 40<br>40<br>also Monofil. bright | #  |   |        | 40                                     |          |                  | 91                   |       |                                     |                          |         |                        |                |  |  |              |          | New Bray  |
| American<br>Bemberg                        | 30* 36                                | 36*   | 45       | 54 54                                   | 74                            | 9.0      | 60 9     | 120<br>90<br>120    |                                  |  | [11]                                    | 22     | 225                                    |          | (11)             | 111                  | 14:   | *also                               | *also in organzine fwist | nzine   | twist                  | Spool Spool    | Reel Spun Yarn<br>Spool Spun Yarn  | n<br>Iru                                     |              | 111      | Bemberg & Matesa<br>Rayon   |
| ACETATE<br>American Viscose                |                                       | 17    | 1        | 20                                      | 28                            | 32       | 1        | 7                   | 54                               |  |   |        | 80                                     |          |                  |                      |       |                                     |                          | 11      | 11                     |                |  |  |              |          | Avisco, Bri. & Dull   |
| Celanese Corp. of<br>America               | 13   13   15   15   15   15   15   15 | 15 15 |          | 20-50 1 20 20                           | 13-26-40 40<br>26 40<br>26 32 |          | 20       | 40                  | 52<br>40<br>52                   | 7 707  | 11111                                   | 11111  | 80<br>80<br>60<br>80                   | 11111    | 120<br>90<br>120 | 13-160<br>160<br>160 | 1111  | 20-80-240<br>80                     | 0                        | 11111   | Also 240               | 00/120         | 3000/1   | Also 2400/120, 3000/160, 3200/160 & 4000/200 | 160 & 40     | 000/200  | Bright & Dull<br>Bright<br>Celaperm<br>Thick & Thin<br>Arnel (Triacetate)<br>Bright & Dull  |
| E. I. du Pont<br>de Nemours<br>& Co., Inc. | 1111111                               | 18-24 | 11111111 | 8-24<br>50<br>24                        | 32 24-66 32                   | 200 200  | 11111111 | 40 40               | 0 60                             | 0 70   | 8 1 1 1 1 1                             | 4 4 4  | 40-80<br>80<br>40<br>80<br>80<br>40-80 | 11111111 | 120              | 160                  |       | 240<br>240<br>240<br>44-70          | 111111111                | 1111111 | 88<br>88<br>240<br>140 | 111111111      | 210  | 132-210<br>210<br>132<br>132-210             | 210          | 1+111(11 | Type 20 Bright & Dull Thick & Thin Color Scaled Type C  |
| Eostman Chemical Products, Inc.            |                                       | 302   |          | 64   61   1   1   1   1   1   1   1   1 | 25 40 25                      | BULLINIA |          | 2 2 2 2 2           | 5 066                            | 50 50 10 10 10 10 10 10 10 10 10 10 10 10 10 | 101111111111111111111111111111111111111 | пинини | 22   22                                | 755      | <u> </u>         | 95                   | 156   | 75<br>230<br>230<br>15<br>15<br>128 | 228                      |         |                        | 11111111111111 | THE PERSON OF TH | 16 D/F                                       | 111111111111 | 16 D/F   | Bright & Dull Estron Chromspun Thick & Thin Estron Thick & Thin Chromspun Lofted Estron Lofted Chromspun Estron Crystal Chromspun Crystal As of Sept. '56 |

| -             |     |    |       |     |      |      |     |      |     |     |     |       |         |             |      |          |         |      |                     |      |      |         |                      |                      |  |
|---------------|-----|----|-------|-----|------|------|-----|------|-----|-----|-----|-------|---------|-------------|------|----------|---------|------|---------------------|------|------|---------|----------------------|----------------------|--|
| Producers     | 30  | 40 | 90    | 09  | 06   | 120  | 150 | 270  | 300 | 450 | 009 | 006   | DENIERS | ERS<br>1165 | 1250 | 1650     | 1800    | 1900 | 2200                | 2400 | 2450 | 2700    | 3300                 | 4400                 | Types & Brand Names                              |
| Am. Viscose   | 1   | 1  | 1     |     |      |      | 09  | 1    | 120 | 120 | 234 | 350   | 490*    |             | 1    | 980*     | 1       | 1    | 980*                | 1    | 1    |         |                      |                      | Avisco Tire: Rayflex and Super Rayflex           |
| Du Pont       | 7   | 20 | 20-35 |     |      |      | 09  |      | 120 |     | 240 | 20-90 |         | 480         | 480  | 720-1100 | 1100    | 111  | 1440                | 1440 |      | 150-270 | 50-270 also 5400/540 | 00/540               | Super Cordura<br>Cordura<br>Fiber E Bright       |
| Ind. Rayon    | 7   |    | 111   |     |      |      | 40  |      | 80  |     | 111 |       | 480     |             |      | 720      |         |      | 720<br>1000<br>2000 |      |      |         | 1440                 | 1440<br>2000<br>4000 | Tryon Bright<br>for<br>tires                     |
| Am. Enka      |     |    |       | 1   |      |      |     |      |     | 1   | 1   | 1     | 480*    |             |      | 720*     | 1       | 1    | 096                 | 1    | Ţ    | 1       |                      |                      | Viscose Tempra<br>Super-High Tenacity            |
| No. Am. Rayon | 1   |    |       |     |      |      |     |      | 7.5 |     |     |       |         |             |      | 720*     | 1       | ŀ    |                     | 1    | 1    |         |                      |                      | Super-Narco<br>High-Narco<br>Super-High Tenacity |
| Beaunit Mills | _   |    |       |     |      | 1    |     |      |     | 1   |     | 1     |         |             |      | 720*     | posses. | 1    | -                   | **** | Ī    |         |                      |                      | High Tenacity                                    |
| Celanese      | 40. |    |       | *08 | 120* | 160* | 180 | 360* | 360 |     |     |       | 1       | 1           | 11   | 11       |         |      |                     | 1    |      | also F  | also F800 and F1600  | F1600                | Acetate: Fortisan<br>F-Fortisan-36               |

Orlon

Du Pont has discontinued the production of all Orlon acrylic fiber continuous filament yarns.

Dacron

Du Pont added the following yarns to its Dacron polyester fiber line: 30/20 dull, 40/27 semi-dull, 40/27 dull, 70/34 in bright and dull, 100/34 in semi-dull, 150/68 bright, and 1100/250 semi-dull. The 40/34 and 220/50 semi-dull yarns have been dropped.

Teflon

Du Pont removed this tetrafluorethylene fiber from the experimental classification and produces it now commercially in 400/60 and 1200/180 counts.

Creslan

AMERICAN CYANAMID Co. announces that development is still continuing on its Creslan acrylic filament yarn, developed under the designation X-54.

PLASTIC YARNS

BOLTA PRODUCTS are now also extruding monofilaments of dimensionally stable polyethylene and rayon

DAWBARN BROTHERS, INC. is offering low-pressure high tensile polyethylene in various shapes from round monofilament to flat ribbons and in sizes from 50 to 3000 denier. Also, the old type high-pressure type polyethylene is being produced in the same sizes and shapes as the saran monofilament. They have taken their product "Acrylast" off the market.

REEVES BROTHERS, INC. have introduced high-tenacity polyethylene filaments, extruded from linear or low-pressure polyethylene as their 700 series, in diameters ranging from .004" to .020", also multifilaments and flat yarns. They are continuing to supply their special "Reevon" filaments of the 600 series, produced from branched or high-pressure polyethylene. Both types of filaments are offered in unstabilized clear or in sunlight stabilized colors in a rariety of specific properties.

FIRESTONE PLASTICS Co. is extruding Velon (Saran) filaments in gauges .005" to .060" round, and elipitical filaments in .005"x.020" to .0245"x140". They also make polyethylene monofilaments, sizes on

order.

POLYMERS, INC. of Middlebury, Vt. is producing the following monofilament yarns: "Shalon" a polystyrene yarn in sizes 0.004 to 0.010 inches; "Algil" a acrylonitrile-styrene copolymer in the same range; "Bristrand" a vinyl chloride acetate filament in 0.006 to 0.030 inches; "45 Yarn" a plasticised vinyl chloride elastic yarn in 0.015 inches up.

GLASS FIBERS

OWENS-CORNING FIBERGLAS CORP. has added a few new types to its line of glass fibers. Otherwise no changes were reported from the producers.

### Part II Staple Fibers Cellulosic

Rayon

AMERICAN VISCOSE produces a large variety of rayon staple, normally ranging from 1 den. to 15 den. Another type, Viscose 32-A, of 1.5 den., is said to possess greatly increased wet and dry strength. Colorspun staple is available in several colors. The company also produces 8 and 15 den. crimped and 20 den. smooth staple for carpets. They also make an irregular cut staple in 5 to 7 inch.

AMERICAN BEMBERG discontinued the production of

its (cuprammonium) rayon staple.

# Non-Cellulosic Yarns

| Producers   | 7 10 12 | 7 10 12 15 20 30 | 30 40    |                                    | 50 60 70 | 75     | 80 100                   |             | 140 150 200         | 200       | 21    | 210 220 250 260 270 300 380 400 420 450 500 540 | 50 26 | 0 270                      | 300 3                    | 80 400  | 0 450     | 450 50                   | 00 540                 |     | 560 60          | 560 600 610                     |                     | 750                              | 770                                | 800       | Brand Names  |
|---|---------|------------------|----------|------------------------------------|----------|--------|--------------------------|-------------|---------------------|-----------|-------|---|-------|----------------------------|--------------------------|---|-----------|--------------------------|------------------------|-----|-----------------|---------------------------------|---------------------|----------------------------------|------------------------------------|-----------|--|
| Am. Cyanamid Co.<br>Am. Enka Corp.<br>Chemstrand  |         | 7                | 100 138  |                                    | 17 20 34 |        | 32 34 34 34              |             | 90 90               | 34        | m m m | 1111  | 222   | 92.                        |                          | 89  | 88        | 111-                     |                        |     | 111             |                                 |                     |                                  | 111                                | 1113      | Acrylic Fiber Creslan<br>Nylenka<br>Nylon, various types                     |
| E. I. du Pont<br>de Nemours<br>& Co., Inc.  |         |                  |          |                                    | 4444     | 11111  |                          |             | 989                 | 348       |       | 20  | 20    |                            |                          |   |           | . 11111                  |                        |     |                 | 1111                            |                     |                                  | 11111                              | 11111     | Color-sealed Semi-dull Dacron bright dull                                    |
| Allied Chemical National Aniline Div. Firestone Plastics Co. Reeves Bros., Inc.         |         | 1 1 111          |          |                                    |          | .004   |                          |             | 900                 | 32        |       |   |       | 000                        |                          | 010.  | 1 1 1 ( ) | 000                      | 60                     |     | 32<br>32<br>012 | 0/180                           | 1                   | 00.                              | .010<br>.005 x .020                | 1 1 1 1 1 | Teflon Caprolan deep-dye nylon Velon ( deliptical) Reeyon, Polyeth. (round)  |
| Bolta Products Dawbarn Bros., Inc.  |         |                  |          | 11111                              |          | [111]  | 11111                    |             |                     | .005      |       |   |       | .008                       |                          | 010   | 11111     | 800                      | 38 .012                |     |                 | × 800.                          | .020                | 90. 00.                          | .005 x .020<br>.010<br>.005 x .020 | 11111     | {flat} {Saran (round) do (elipticat) Saran; rd. & elipticat Polyeth. (round) |
| Southern Lus-Trus   |         |                  |          |                                    |          |        |                          |             |                     | 1         |       |   |       |                            |                          |   |           | 900.                     |                        |     |                 |                                 |                     |                                  | 010.                               |           | Saran  |
| National Plastic<br>Products Co.<br>Saran Yarns Co.<br>Owens-Corning<br>Fiberglas Corp. |         |                  |          | 102                                |          |        | 204                      | ***         | 306                 | 204       |       |   |       | Mon                        | 204<br>306-408<br>612    | Tag I   | 0, 100    | .008<br>and 124<br>204   | 4 den.<br>4 204<br>408 |     | 11 1            | 204-408<br>612-816<br>122       | 000                 | x .020                           | 010                                | 11 111    | Saran Monofil, rd. do oval & flat Saran Monofil, "Fiberglas" yarns do do     |
| L.O.F. Glass<br>Fibers Co.  |         |                  |          | 102                                |          |        | 204                      | • 1 ( ) ( ) | 204                 | 408       |       |   |       | 612                        | 204<br>612<br>380<br>408 | 816   |           | 612                      | 7                      |     |                 | 408<br>408<br>600<br>612<br>816 |                     |                                  | 111111                             | 111111    | Glass Fiber various types  |
| Pittsburgh Plate<br>Glass Co.   |         |                  |          |                                    |          |        | 204                      |             | 037                 | 204       | 1350  | 030   |       | 0                          | 12                       | 408   |           | 0                        | 000                    |     |                 | 408                             | 2                   |                                  |                                    | 111 8     | Fiber Glass<br>Yarns   |
|   | 815 84  | 840 915          | 915 1100 | 1120                               |          | 1220 1 | 1225 1540                |             | 1650                |           |       | 1850  | 20    | 2050 2465                  |                          | 2520  | 7         | 2770                     | 2920                   |     | 3000 3320       | 320                             | 3624                | 36                               | 3675 3720 5040                     | 2040      |  |
| Am. Enka Corp.<br>Chemstrand<br>E. I. du Pont   | 7 4     | 140              | 250      |                                    |          |        |                          |             |                     |           |       |   |       |                            | 4                        | 420   |           |                          |                        |     | A               | npui os                         | strial Ya           | Also industrial Yarn 15.120/2520 | 0/2520                             | 840       | Nylenka<br>Nylen<br>Nylen<br>Dacren  |
| Allied Chemical<br>National Aniline Div.<br>Firestone Plastic Co.                       |         | 136              | 111      | .008 x .020                        | 120      |        |                          | 0           | .0145               |           | 00.   | .009 x .030                                     |       |                            | .013                     | 2000<br>.013 x .030 L   | 9 .       | 50,000 as Specified .020 | Specifi<br>.020        | poi |                 |                                 |                     |                                  |                                    |           | Caprolan<br>Velon (round)  |
| Southern Lus-Trus<br>Corp.  |         |                  | 111      | .008 x .020                        | 120      |        |                          |             | 210.                |           | 000   | 140   |       |                            |                          |   |           |                          | .020<br>.013 × .030    | 030 |                 |                                 |                     |                                  | 000                                |           | Saran (round) do (eliptical)   |
| Reeves Bros., Inc   | 4500F.  | c IO.            | 111      | .012<br>008 x .0                   | 120      |        |                          | .013        | .013 x .030<br>.015 |           | 24    |   |       |                            | 3                        |   |           |                          | .020<br>.013 x .030    | 030 |                 |                                 | .030                |                                  | 2011                               |           | (flat) (Saran (round) do flat oval   |
| Dawbarn Bros., Inc.   |         |                  |          | .008 x .020<br>.012<br>.006 x .019 | 920      |        |                          | 0           | .006 × .020         | 00/12/744 | 744/6 | 1200/24   |       | /10 2                      | 500/30                   | . 020<br>. 020<br>. 020<br>. 020<br>. 030<br>. 030 | /50 45    | 0.1700                   | .020<br>.020<br>.020   | 030 |                 | 10.                             | .030<br>.0375 x .83 | 5                                |                                    |           | Saran (round) do eliptical Saran round do flat do oval                       |
| Owens-Corning<br>Fiberglas Corp.  | 816     | 1836             |          | 111                                |          | 2      | 816 3060<br>1224<br>2448 |             | 3264                |           |       | 1224  |       | 2040<br>1632<br>4080 2448  | 82                       |   | -         | 836                      |                        |     | 3               | 3264                            | 2448                | 2448                             | 00                                 |           | "Fiberglas" yarns  |
| L.O.F. Glass<br>Fibers Co.  | 1632    | 900              |          |                                    |          | 1111   | 200 224                  |             | 3264                |           |       | 1224<br>1800<br>1836                            | 707   | 40<br>1632<br>2400<br>2448 | 802                      |   |           | 836                      |                        |     | 3               | 3264                            | 2448                |                                  | 2448                               |           | Glass Fibers<br>(others in den.<br>up to 10,000)                             |
| Pirtsburgh Plate  | 11      | 1836             |          |                                    |          | 2 2    | 2448<br>816<br>2448      |             |                     |           |       | 1224  | 4080  | 08                         |                          |   | 7         | 2700                     |                        |     |                 |                                 | 2448                |                                  |                                    |           | Fiber Glass  |

#### TABLE 4

# STAPLE FIBERS Cellulosic

| Deniers | Length<br>in inches | Luster                         | Crimp          | Spinning<br>Systems | Deniers      |        | Length<br>in inches | Luster                     | Crimp                 | Spinning<br>Systems                     |
|---------|---------------------|--------------------------------|----------------|---------------------|--------------|--------|---------------------|----------------------------|-----------------------|---|
| Rayon   |                     |                                |                |                     | HARTFO       | ORD R  | AYON                |                            |                       |   |
| AMERIC  | AN VISCOSE          |                                |                |                     | 1.50<br>8.00 | 11/2 8 | 2                   | bright & dull              | none                  | Cotton<br>Cott. & Wool                  |
|         | 1-9/16              | bright                         | yes            | Cotton              | 15.00        | 3      |                     | bright & dull              | yes<br>with & without | Cott. & Wool                            |
| 1.25    | 21/4<br>11/8        | dull<br>bright                 | yes            | Cotton              | COURTA       | 05     |                     |                            |                       |   |
| 1.50    | 1-9/16              | bright & dull                  | none           | Cotton              |              |        |                     |                            |                       |   |
| 1.50    | 1-9/16 & 1/2 SSB    | bright                         | none           | Cotton              | 1.50         | 11/8   |                     | bright                     | none                  | Cotton                                  |
| 1.50    | 2                   | bright & dull                  | none           | Cotton              | 1.50         | 1-9/1  |                     | bright & dull              | none                  | Cotton                                  |
| 3.00    | 11/8                | bright                         | with & without | Cotton              | 1.50         | 1-9/1  | 6                   | Coloray                    | none                  | Cotton                                  |
| 3.00    | 1-9/16              | bright & dull                  | with & without | Cotton              | 1.50         | 2      |                     | bright & dull              | none                  | Cott. & Non-Wov.                        |
| 3.00    | 1-9/16 & 1/2 SSB    | bright                         | none           | Cotton              | 3.00         | 1-9/1  | 0                   | bright & dull              | none                  | Cotton                                  |
| 3.00    | 2                   | bright & dull                  | with & without | Cott. & Wool        | 3.00         | 4      |                     | bright & dull<br>& Coloray | none                  | Cott. & Wool                            |
| 3.00    | 21/2                | bright & dull                  | none           | Cott. & Wool        |              |        |                     | & Colordy                  |                       |   |
| 5.50    | 1-9/16              | bright & dull                  | yes            | Cott. & Wool        | DELAW        | ARE R  | AYON                |                            |                       |   |
| 5.50    | 2                   | bright & dull                  | with & without | Cott. & Wool        |              | ,      |                     | balaka e                   |                       | ,                                       |
| 5.50    | 21/2                | bright & dull                  | none           | Cott. & Wool        | 7.5<br>15    | - { :  | 2-7                 | bright & semi-dull         | ****                  | all systems                             |
| 5.50    | 3 to 5              | bright & dull                  | none           | Worsted             | 15           | - 1    | 21/4-41/4           | zemi-duit                  | yes                   | Wool                                    |
|         | 5 to 7              | bright & dull                  | none           | Worsted             | 13           |        | 274 -474            |                            |                       | *************************************** |
|         | 1-9/16              | bright                         | yes            | Carpet              |              |        |                     |                            |                       |   |
| 8.00    | 3                   | bright                         | yes            | Carpet              | Aceta        | 4.0    |                     |                            |                       |   |
| 15.00   | 4                   | bright & dull<br>bright & dull | yes            | Carpet              | MEELG        | ite    |                     |                            |                       |   |
|         | 5 to 7              | bright & dull                  | yes<br>ves     | Carpet<br>Carpet    | CELANE       | SE CC  | DRP.                |                            |                       |   |
|         | 1-9/16              | bright a duli                  | with & without | Carpet              | 2.00         | any le | nath                | bright & dull              | yes                   | all systems                             |
| 15.00   | 4                   | dull                           | with & without | Carpet              | 3.00         | any le |                     | bright & dull              | yes                   | all systems                             |
|         | 4                   | bright & dull                  | ves            | Carpet              | 5.50         | any le |                     | bright & dull              | ves                   | all systems                             |
|         |                     | g a dan                        | 1              |                     | 8.00         | any le |                     | bright & dull              | yes                   | all systems                             |
|         |                     | "Viscose 3                     | 32"            |                     | 12.00        | any le |                     | bright & dull              | ves                   | all systems                             |
| 1.50*   | 1-9/16              | bright                         | ves            | Cotton              | 17.00        | any le | ength               | bright & dull              | yes                   | all systems                             |
| 1.30    | 1-2/10              | brigin                         | 100            | W011011             | 35.00        | any le |                     | bright & dull              | yes                   | all systems                             |
|         | -                   |                                |                |                     | 50.00        | any le | enath               | bright & dull              | yes                   | all systems                             |

#### Non-Cellulosic

| Nylor  | 1:  |   |  |            |                       | Vinyo   | on  |                                       |   |                                       |   |
|--|---|---|--|------------|-----------------------|---|---|---------------------------------------|---|---------------------------------------|---|
| Am. En   |   |   |  |            |                       | 3   |   | 11/4                                  | bright  | slight                                | Cott. & Wool  |
| to<br>15   | various lengths   | sen   | ni-dull & bright   | all sy     | ystems                | 3<br>51/2<br>51/2                                     |   | 2<br>1<br>3½                          | bright<br>bright<br>bright  | slight<br>slight<br>slight            | Cott. & Wool<br>Cott. & Wool<br>Carpet                                      |
| Du Pon   | ,   |   |  |            |                       |   |   |                                       |   |                                       |   |
|  | 11/8, 11/2, 2, 21/2,<br>11/8, 11/2, 2, 21/2,<br>11/8, 11/2, 2, 21/2,<br>11/2, 3, 41/2, 61/2                             | 4½<br>3,4½<br>3,4½                                      | semi-dull & bright<br>semi-dull & bright<br>semi-dull & bright | yes<br>yes | all systems           | Vica  | ra Zei  | n Fiber                               |   |                                       |   |
| 15.00  | 11/2, 3, 41/2, 61/2   |   | bright   | yes        |                       | 2, 3,   | 5, 7  | any<br>length                         | dull or<br>bright   | yes                                   | all sustance  |
| Industri<br>1.5  | ial Rayon Corp.   |   |  |            |                       | 15  |   | from                                  | bright only   | yes                                   | all systems   |
| 3.0<br>6.0<br>8.0<br>15.0  | 1-1/16"<br>through<br>71/2"   | bright or<br>semi-dull                                  | yes  | all s      | ystems                |   |   |                                       |   |                                       |   |
|  |   |   |  |            |                       | Acril   | an  |                                       |   |                                       |   |
| Nationa  | Chemical of Aniline Div. on.—Lengths as s   | pecified.   |  |            |                       | 2.0<br>2.5 h<br>3.0<br>5.0<br>8.0                     | ni-bulk                                       | 1-9/16"                               | brigh<br>to 5" semi-  |                                       | all-systems   |
|  |   |   |  |            |                       |   |   |                                       |   |                                       |   |
| 1.25   | ron" Polyeste   | r Fiber   |  |            |                       | Cresl   | an Ac   | rylic Fib                             | er  |                                       |   |
| 1.25<br>1.50<br>3.00   | all in 1½, 2, 2½, 3 &   |   | ni-dull yes  |            |                       | 1.5<br>2.0<br>3 0<br>5.0                              | an Ac   |                                       | bright & semi-dull  | yes<br>yes<br>yes<br>yes              | systems<br>where<br>applicable  |
| 1.25<br>1.50<br>3.00<br>4.50<br>6.00<br>Fiber  | all in $1\frac{1}{2}$ , 2, $2\frac{1}{2}$ , 3 & fill  | $4\frac{1}{2}$ sem                                      | ni-dull yes  |            |                       | 1.5<br>2.0<br>3.0<br>5.0                              | 11/2<br>11/2, 2,<br>11/2, 2,<br>2, 3, 4       | 3, 4                                  | bright & semi-dull  | yes<br>yes                            | systems   |
| 1.25<br>1.50<br>3.00<br>4.50<br>6.00<br>Fiber  | all in<br>1½, 2, 2½, 3 &<br>fill<br>n" Acrylic Fi   | $4\frac{1}{2}$ sem                                      | ni-dull yes  |            |                       | 1.5<br>2.0<br>3.0<br>5.0                              | 11/2<br>11/2, 2,<br>11/2, 2,<br>2, 3, 4       | ified Ac                              | bright & semi-dull semi-dull  | yes<br>yes<br>yes                     | systems   |
| 1.25<br>1.50<br>3.00<br>4.50<br>6.00<br>Fiber  | all in 1½, 2, 2½, 3 & fill n" Acrylic Fi  | 4½ sem  | ni-dull yes  |            |                       | 1.5<br>2.0<br>3.0<br>5.0<br>Verel                     | 1½<br>1½, 2,<br>1½, 2,<br>1½, 2,<br>2, 3, 4   | ified Ac                              | bright & semi-dull semi-dull rylic Fiber semi-dull, bright & du semi-dull,  | yes<br>yes<br>yes<br>yes              | systems<br>where<br>applicable  |
| 1.25<br>1.50<br>3.00<br>4.50<br>6.00<br>Fiber  | all in<br>1½, 2, 2½, 3 &<br>fill<br>n" Acrylic Fi   | 4½ sem  |  |            |                       | 1.5<br>2.0<br>3.0<br>5.0<br>Verel                     | 11/2<br>11/2, 2,<br>11/2, 2,<br>2, 3, 4       | ified Acongth                         | bright & semi-dull semi-dull rylic Fiber semi-dull, bright & du semi-dull, bright & du semi-dull.   | yes<br>yes<br>yes<br>II yes<br>II yes | systems<br>where<br>applicable  |
| 1.25<br>1.50<br>3.00<br>4.50<br>6.00<br>Fiber<br>"Orlo<br>2.00<br>3.00<br>4.50<br>6.00<br>Type<br>Color        | all in 1½, 2, 2½, 3 & fill  n" Acrylic Fi all in 1½, 2, 2½, 3 & 39 Mixed denier,  | $4\frac{1}{2}$ sem  ber $4\frac{1}{2}$ sem  cut lengths |  | in regu    | Woolen<br>lar or high | 1.5<br>2.0<br>3.0<br>5.0<br>Verel<br>2                | 1½<br>1½, 2,<br>1½, 2,<br>1½, 2,<br>2, 3, 4   | ified Acongth                         | bright & semi-dull semi-dull rylic Fiber semi-dull, bright & du semi-dull, bright & du  | yes<br>yes<br>yes<br>H yes<br>H yes   | systems<br>where<br>applicable<br>all systems<br>all systems                |
| 1.25<br>1.50<br>3.00<br>4.50<br>6.00<br>Fiber<br>"Orlo<br>2.00<br>3.00<br>4.50<br>6.00<br>Type<br>Color<br>shr | all in 1½, 2, 2½, 3 & fill  n" Acrylic Fi all in 1½, 2, 2½, 3 & 1½, 2, 2½, 3 & 39 Mixed denier, sealed in black inkage. | $4\frac{1}{2}$ sem  ber $4\frac{1}{2}$ sem  cut lengths | ni-dull yes<br>yes   | in regu    |                       | 1.5<br>2.0<br>3.0<br>5.0<br>Verel<br>2<br>3<br>5<br>8 | 11/2<br>11/2, 2, 11/2, 2, 2, 11/2, 2, 2, 3, 4 | ified Acongth                         | bright & semi-dull semi-dull semi-dull, bright & du | yes<br>yes<br>yes<br>H yes<br>H yes   | systems<br>where<br>applicable<br>all systems<br>all systems<br>all systems |
| 1.25<br>1.50<br>3.00<br>4.50<br>6.00<br>Fiber<br>"Orlo<br>2.00<br>3.00<br>4.50<br>6.00<br>Type<br>Color        | all in 1½, 2, 2½, 3 & fill  n" Acrylic Fi all in 1½, 2, 2½, 3 & 1½, 2, 2½, 3 & 39 Mixed denier, sealed in black inkage. | $4\frac{1}{2}$ sem  ber $4\frac{1}{2}$ sem  cut lengths | ni-dull yes<br>yes   | in regu    |                       | 1.5<br>2.9<br>3.0<br>5.0<br>Verel<br>2<br>3<br>5      | 11/2<br>11/2, 2, 11/2, 2, 2, 11/2, 2, 2, 3, 4 | 3, 3, 4  ified Acought math math math | bright & semi-dull semi-dull semi-dull, bright & du | yes<br>yes<br>yes<br>H yes<br>H yes   | systems<br>where<br>applicable<br>all systems<br>all systems<br>all systems |

COURTAULDS (ALABAMA) INC. has increased its range of Coloray staple to 19. Otherwise the production

remained unchanged.

Delaware Rayon, a Division of Mohasco Industries, Inc., produces staple of 7.5 and 15 den., bright and semi-dull with crimp. The staple length is from 2 to 7 inch, for the cotton, woolen, or worsted systems of spinning. A variable 2¼" to 4½" staple in 15 den. is produced particularly for the woolen system. Solution-dyed staple is now available in 10 standard colors.

Hartford Rayon Co., a Division of Bigelow-Sanford Carpet Co., is now also offering a solution-dyed 15 den. staple, which comes in 8 colors in bright and dull and 2 colors in bright luster. The physical properties of this staple are similar to those of their white 8 and 15 den. crimped Viscalon staple. This staple is used primarily in the tufted and woven carpet industry, but it also has found a place in the upholstery and drapery fields. Viscalon is their trademark for their heavy denier crimped staple.

#### Acetate

EASTMAN CHEMICAL PRODUCTS has discontinued production and sale of Estron and Chromspun acetate staple.

#### Non-Cellulosic

#### Nylon

Du Pont, in addition to the staple types shown in Table 4, also offers uncrimped nylon staple in ½-, ½-, and ¾-inch lengths. This staple has a special dispersing finish for experimental work on paper-like non-woven structures.

AMERICAN ENKA, which sells its nylon staple also under the tradename "Nylenka", produces various lengths of staple in 3 den. semi-dull and 6, 8, 10, and 15 den. bright, for processing on all systems.

ALLIED CHEMICAL (National Aniline Div.) is producing staple from its Caprolan deep-dye nylon in

15 den., in lengths as specified.

INDUSTRIAL RAYON is manufacturing its Type 6 nylon staple at its plant at Covington, Va. Of major interest during the past year was the development of new twist setting techniques for permanent carpet textures. They have also introduced a new 8 den. per filament fiber, designed to give better blends with 8 den. rayon, as well as to provide an intermediate denier between 6 and 15 for end uses where this product was needed. In addition they brought out a new delustered carpet fiber.

Orlon Acrylic Fiber

Du Pont has added a 4.5 and 6 den. per filament staple, also a Type 39 mixed denier and cut length, with an average denier of 4.2 for woolen system spinning.

#### Acrilan

THE CHEMSTRAND CORP. produces its staple in 2, 2.5-Hi-bulk, 3, 5, and 8 den. in lengths of from 1 9/16 to 5 inch. The fiber is shipped in bales of approximately 400 pounds.

#### Verel

EASTMAN CHEMICAL PRODUCTS, which developed this acrylic fiber, is offering it initially in 2, 3, 5 and 8 den. per filament in practically any length applicable to known systems of textile manufacture. It is currently being produced in semi-dull luster, but can also be made in bright and dull form, and is provided with a standard lubricant (finish) suitable for the usual textile systems. Verel is presently in pilot plant production and is scheduled for regular production in October.

#### Creslan

AMERICAN CYANAMID, at its plant at Stamford, Conn., is producing pilot plant quantities of this acrylic fiber of 1.5, 2, 3, and 5 den. staple. This staple is being made in high bulk form in bright and semidull.

#### **Dacron Polyester Fiber**

Du Pont added to its staple line a 1.25 den. per filament, 1½ to 4½" in length, semi-dull. Dacron staple is also available in the form of Fiberfill, used for pillows, upholstery, quilting and similar uses.

#### Dynel

CARBIDE AND CARBON CHEMICALS Co., a Division of Union Carbide and Carbon Corp., produces this staple at its South Charleston, W. Va. plant. The staple, in the types shown in Table 4, has a light cream or wool-white color and is also available in a number of solution-dyed colors and in whitened form

#### Vinyon

This staple is produced by AMERICAN VISCOSE CORP. at its Meadville, Pa. plant. It is used in the manufacture of heat-sealing paper, vinyl quilting, and is blended with other fibers in non-woven fabrics.

#### Vicara Zein Fiber

VIRGINIA-CAROLINA CHEMICAL CORP. manufactures its zein fiber staple at its plant in Taftville, Conn. The natural color of Vicara is pale yellow, however both bleached and unbleached staple are available. A suitable finish is applied to the staple depending on the manner in which it is to be processed. Vicara staple is being blended with practically all of the natural and man-made fibers.

#### Darlan

This new dinitrile fiber, developed by B. F. GOODRICH CHEMICAL Co., is at present being produced on a semi-works scale at its Avon Lake, Ohio plant. Darlan is available in staple form only in the types shown in Table 4. To date, the fiber has been used commercially only in fabrics for women's deep-pile luxury coats, but experiments are going on for its application to other fabrics, such as men's suitings, hand knitting yarns, and others.

#### Saran

Saran staple in 10, 16, 22, 30, 45 and 70 Den. is produced by Saran Yarns Co. of Odenton, Maryland.

#### Velon

This staple is offered in 22 den. by Firestone Plastics Co. of Pottstown, Pa.

#### Teflor

DU PONT produces this staple in 6.67 den. and  $\frac{1}{2}$  to 5 inch lengths.

#### **Part III Tow**

#### Rayon

American Viscose regularly produces large (200,000) total den. and small (2200 and 4400) den. tow in 1.5 to 9 den. in bright and dull luster. Colorspun tow is available in several colors. The tow is used in men's wear, women's apparel, for flock cutting and tea bags.

CELANESE CORP. is also producing rayon tow, which comes in bright and dull, crimped and uncrimped. It is used for flocking and in women's wear.

| TABLE 5                               |   |  | Т  | ow                                     |   |  |
|---------------------------------------|---|--|--|--|---|--|
| Filament<br>Denier                    | Number of Fi                            | laments  | Total<br>Denier  | Filament<br>Denier                     | Number of Filaments                           | Total<br>Denier                          |
| Rayon                                 |   |  |  | "Dacron" Polyeste                      | r Fiber                                       |  |
| AMERICAN VISCO                        | OSE<br>ght & dull                       |  | 2,200<br>4,400 and<br>200,000  | 1.5<br>3.0<br>4.5<br>6.0<br>Semi-dull. |   | alf<br>385,000                           |
| CELANESE CORP.                        |   |  | 200.000  | "Orlon" Acrylic Fi                     | hor   |  |
| 1.5<br>3.0<br>5.5<br>8.0              | all crimped and uncrin                  |  | 200,000<br>200,000<br>200,000<br>207,000                                 | 2.0<br>3.0<br>4.5<br>6.0               | 235,000<br>157,000<br>104,500<br>72,300       | all<br>470,000                           |
| bright and de                         | in crimped and uncrin                   | прев.  |  | Semi-dull. Color                       | rsealed in black only in 3.0 den.             |  |
| Acetate                               |   |  |  | Dynel                                  |   |  |
| CELANESE CORP.  2 3 3 5.5 5.5 8       |   |  | 91,200<br>136,800<br>173,800<br>216,000<br>100,000<br>139,000<br>230,000 | 2<br>3<br>6<br>12<br>24<br>Semi-bright | 90,000<br>60,000<br>30,000<br>15,000<br>7,500 | all<br>180,000                           |
| 12<br>17<br>20<br>50<br>Bright and du | II, crimped and uncri                   | nped   | 230,000<br>326,400<br>384,000<br>240,000                                 | Acrilan  2.0 2.5 hi-bulk 3.0 5.0       | 120,000<br>72,000<br>72,000<br>72,000         | 240,000<br>180,000<br>216,000<br>360,000 |
| Nylon                                 |   |  |  | Semi-dull.                             |   |  |
| DU PONT<br>1.5 sem<br>3.0 sem         | ni-dull & bright 14<br>ni-dull & bright | (not crimpse<br>20,000 330,000<br>13,333 430,000<br>55,000 330,000<br>22,000 330,000 | 350,000<br>455,000<br>350,000<br>350,000                                 | "Vicara" Zein Fib                      | er  | 540,000<br>750,000<br>540,000<br>525,000 |
| Semi-dull and                         | bright.                                 |  |  | 15 (experimenta                        | l quantities only)                            | 594,000                                  |

#### Acetate

EASTMAN CHEMICAL PRODUCTS no longer manufactures this tow for textile users.

CELANESE CORP. produces a tow, tradenamed Celatow, in types shown in Table 5.

#### Nylon

Du Pont's nylon tow production remained unchanged as shown in the Table.

ALLIED CHEMICAL (National Aniline Div.) has discontinued the manufacture of tow.

#### Orlan

Du Pont offers its acrylic fiber tow now also in 4.5 and 6 den.

#### Acrilan

This tow is produced by Chemstrand in commercial quantities. It is available in 2, 2.5, 3 and 5 den., semi-dull.

#### Dacron

This polyester fiber tow shows no changes in the types produced (see Table 5).

#### Dynel

CARBIDE AND CARBON offers its vinyl resin tow now in 180,000 total deniers.

#### Vicara

This zein fiber tow is produced by Virginia-Carolina Chemical Corp. in continuous form. The 15 den. type is available in experimental quantities only.

#### Creslan

AMERICAN CYANAMID manufactures this tow at present in pilot plant quantities only. It comes in 1.5, 3, and 5 den., in semi-dull or bright, and is crimped.

#### Velon

FIRESTONE PLASTICS Co. offers this tow made up of 24,800/200, 20,000/200, 12,400/100, 10,000/100 and 5000/100 yarns continuously wound on tubes.

#### Teflon

DU PONT'S tetrafluorethylene fiber tow is available in 6.67 den. per filament, in total deniers from 4,000 to 9,000.

#### METALLIC YARNS

(Non-Tarnishable)

#### Lame

This metallic yarn is produced by STANDARD YARN MILLS, INC. of Glendale, New York City. It is available in widths ranging from 1/16 through 1/120", also in staple and flock form. It may be had in gold and silver and a number of other colors. Lamé with Mylar is available in both laminated and metallized

in widths of 1/16 to 1/100" and in a wide range of colors. Standard also supplies supported yarns both of Lamé and Lamé with Mylar, with the supporting fibers including Fortisan, nylon, cotton and silk.

#### Lurex

The Dobeckmun Co., Lurex Yarn Div., of Cleveland, Ohio offers this yarn in width from ¼ to 1/128", supported or unsupported, and in all types of putups. It is also available in staple form in 1/128" width. It comes in a wide range of colors, which includes metallic colors and porcelain, or muted sheen colors. Multicolor yarns include as many as five colors in one yarn. Their Lurex MM, made with metallized Mylar, may be had in gold or silver colors

Metlon

"Metlon" and "Metlon with Mylar" are the tradenames for the metallic yarns made by Metlon Corp., a subsidiary of Acme Backing Corp. The Metlon with Mylar yarn is being manufactured in widths from 1/120", yielding 32,000 yards to the pound, to 1/32". The yarn can be used unsupported in any width and can be vat dyed. Gold and silver is stocked, other colors may be had by special order. The company is also manufacturing Metlon buty-rate quality, especially the 1/120" width, the narrowest, which yields 21,000 yards and has great pliability and softness. Metlon 1/120" is also furnished in staple form in any desired length. The butyrate yarns come in gold and silver, as well as a wide range of metallic colors. The company also offers iridescent yarns in a variety of widths.

Reynolds Aluminum Yarn

REYNOLDS METALS Co. of Richmond, Va. manufactures this yarn in widths from \%" to 1/80" made of bright aluminum foil combined with either Mylar polyester film or acetate butyrate. Reynolds offers a full line of metallics in either supported or unsupported form and on any desired package. A wide range of colors are available and any non-standard color may be produced.

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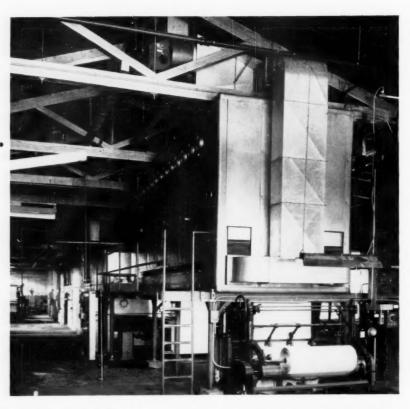
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# How to dye

## **ACRILAN-WOOL BLENDS**

Increasing use of Acrilan makes timely this report on the dyeing of this acrylic fiber in blends with wool

By W. H. Hindle and T. H. Guion

THE CHEMSTRAND CORP.

Before delving into the application of wool dyestuffs to Acrilan-wool blends, it should be stated that Acrilan is also readily dyeable in complete color ranges with dispersed acetate and cationic dyestuffs and mixtures thereof. Thus techniques for dyeing wool-polyester blends and other acrylic-wool blends are available for dyeing Acrilan-wool blends although no carriers are required. Because of problems inherent in carrier dyeing, and difficulties involved in the staining of wool with cationic or dispersed acetate dyestuffs (with consequent long dyeing times and controversial fastnesses), it was decided that the utilization of the same wool dyestuffs for both fibers offered a greater prospect for success in mill application.

The various types of wool dyestuffs are all anionic, and usually are salts of sulfonic or carboxylic acids. The mechanism by which these substances dye wool is reasonably well known. They react chemically with the basic amino groups in wool, in the presence of an acid, much as a base or alkali reacts with an acid to form a salt.

Other fibers which may be dyed with wool colors (such as silk, polyamide fibers like nylon 66 and nylon 6 and regenerated protein fibers like Vicara and Lanital) have affinity for these dyestuffs due to the presence of amino groups in the fiber, even though the number of these groups may be very small. Therefore, to make an acrylic fiber receptive to wool dyes, basic groups had to be incorporated into the fiber.

Considerations involved in the polymerization of the starting materials as well as some of the resultant properties of the fiber itself dictated the inclusion of a weakly basic substance. Because of this it is necessary to use a mineral acid, such as sulfuric, to obtain absorption and penetration of dyestuffs.

#### One Type of Dyesite

The use of sulfuric acid has been considered in dyeing heavy shades on nylon, but its action and its affect on the polyamide fibers are quite different from that on Acrilan. There are two kinds of dyesites for anionic dyes in nylon, one of which can be dyed with weak organic acids and the other requiring a mineral acid. The use of the latter results in loss in tensile strength and lower color-fastness. In Acrilan, however, there is only one type of dyesite for anionic dyes and that one is present in ample quantity for any shade desired. Twelve percent of color has been applied to Acrilan in the same length of time and under the same conditions as two percent.

In view of the need for use of sulfuric acid in dyeing Acrilan, the importance of its resistance to attack by mineral acids now becomes evident. However, it should be stated parenthetically that no more sulfuric acid is needed to dye Acrilan than is commonly used to apply Neolan colors to wool.

To gain an insight into the necessity for using mineral acids in dyeing Acrilan, let us look at the mechanism by which wool is dyed. When wool is placed in a bath with a level dyeing wool dye and acid is added, the hydrogen ions and anions of the acid are rapidly absorbed by the wool. The anions of the dyestuff are absorbed more slowly. This is accompanied by a desorption of the anions of the acid, as they are displaced in the fiber by anions of the dyestuff.

Two features of this mechanism are important to our discussion: One is that no dyestuff is absorbed in the absence of hydrogen ions. The other is that acid is absorbed first and is followed later by absorption of dyestuff. The amount of dyestuff absorbed is dependent not only on the number of basic groups or dyesites in the fiber, but also on the extent to which these dyesites first react with the acid present. That, in turn, is dependent upon the strength or ionization constants of the acid and base involved.

#### Union Dyeing

Consequently those dyestuffs which are absorbed by wool in the presence of acetic acid require a strong acid such as sulfuric for their application to the more weakly basic dyesites in Acrilan. The need for a mineral acid in dyeing Acrilan might seem to preclude the use of those chrome, milling and direct dyestuffs which are sensitive to inorganic acid. However, several methods can be used to apply these acid sensitive dyes in the presence of mineral acid. They are of great value in the union dyeing of Acrilan-worsted and will be described in detail later.

The concept of combining a weakly basic material with the polyacrylonitrile, to produce an acrylic fiber capable of accepting dyestuffs by mechanisms similar to that of wool, was fully justified. For the first time an acrylic fiber could be dyed with wool dyestuffs without having to resort to the complicated cuprous ion technique. Although providing an excellent method of dyeing 100% Acrilan by itself, incorporation of the weakly basic material was not alone sufficient to enable blends of Acrilan-wool to be union dyed by normal wool dyeing methods due to the difference in dyeing rate of wool and Acrilan under normal dyeing conditions, a point which had been overlooked by the fiber chemists.

The conditions of acidity necessary for applying most wool dyes to Acrilan and to wool are so different that the common methods of juggling conditions to obtain equal dyeing rates on the two fibers met with little success. Conditions of acidity necessary to dye Acrilan could result in a rapid "strike" and un-

Based on a talk before the Fifth Canadian Textile Seminar, Kingston, Ont., June 6-7, 1956.

level dyeing of the wool. It became apparent, therefore, that other means would be necessary to produce union shades on Acrilan and wool. So far three gen-

eral methods have been investigated.

The means which would probably occur first to most people would be the addition of a leveling agent. The common leveling agents used for wool or nylon, such as Glauber salt or Calsolene Oil HS are anionic, like the dyestuff itself. They are absorbed by the wool along with the dye, and through preferential absorption they both retard entrance of dye into the fiber and later displace some of that already in the fiber. Although this results in level dyeing on either fiber, they do not help in the union-dyeing of Acrilan and wool. The reason for this is that they are absorbed more strongly by the acrylic fiber, so much so that it is even possible to completely reserve Acrilan by their use.

#### Surface—Active Agents

There is another type of dyeing assistant sometimes used in dyeing tippy wool. These are cationic surface-active agents, and act in a manner quite different from those just described. These cation-active materials are amines or quaternary ammonium compounds. In a bath of high acidity, they remain in the bath and combine with the dyestuff. The resulting complex of a high molecular weight cation from the dyeing assistant and of a high molecular weight anion from the dyestuff has very limited solubility in water.

The separation of this complex from the bath is very easily prevented, however, by addition of a non-ionic emulsifying agent to disperse the complex. These non-ionic agents are usually condensation products of ethylene oxide with alcohols, phenols, or fatty acids. Some cationic dyeing assistants have also been made by reaction with ethylene oxide, in which case the non-ionic dispersing agent may be unneces-

sarv.

These cation-active substances, by reacting with the dye to form a water-insoluble but dispersed complex, convert the dye into a form not so rapidly absorbed by the fiber. However, they only slow down absorption of dye but do not prevent it; for on addition of acid and heating the bath, the dye is slowly

absorbed by the fiber in the usual manner.

By retarding absorption of dye by wool at low temperatures, the amount of dye left in the bath to be absorbed at temperatures close to the boil is increased, at which temperatures the dyeing rates of Acrilan and wool are much more nearly the same. This means a greater proportion of the dye is absorbed by the Acrilan than would be so in the absence of the cation-active material.

#### Avoiding Sensitivity to Acids

Another benefit from complexing the dyestuffs with cation-active substances in a dispersed form is that the dyes are no longer sensitive to acids. Neutral dyeing metal-complex dyes, acid milling dyes, and chrome dyestuffs can all be safely used with mineral

acid without any danger of precipitation.

Although formation of a complex with the cationactive material does retard the initially rapid absorption of dye by the wool, reliance on this alone is not sufficient to equalize the widely different dyeing rates of Acrilan and wool and dye them into union shades. Fortunately, these materials have another effect in the bath of possibly even greater importance, and that is to promote the rapid transfer of dye from wool to Acrilan.

This redistribution of dye between the two fibers is a result of several factors: First, of the leveling action of these cationic agents on wool and second, of the fact that Acrilan attracts dyes more strongly than wool in the presence of mineral acid. So effective is the cation-active material in speeding the migration of dye from wool to Acrilan, that all of the dye may first be applied to wool by methods conventional to the individual dyestuffs. At this point the sulfuric acid and cationic agent are added to the exhausted bath. In one to two hours boiling in a nearly colorless bath, the dye transfers from wool to Acrilan and a union is obtained. The rate of transfer can be controlled by the amount of acid and cation-active substance added. Even on prolonged boiling, however, the final distribution of dye on the two fibers is about the same and there is little danger of "over-shooting the mark"

A leveling agent which is effective in transferring dyes from wool to Acrilan is also effective in leveling dyes on wool. The combination of slow absorption of dye by the wool followed by transfer to Acrilan is a system designed for ease of control of the dyeing process and uniformity of results, both of which have

been salient features in its operation.

Not all dyestuffs of any one class have the same dyeing rate or leveling ability, although they may be applied by the same method. Neither does any set of dyes which act alike on one fiber necessarily act alike on another fiber. Although all classes of wool dyes have been used to union-dye Acrilan and wool, not all dyes of any one class work equally well. How well they work depends on their leveling ability under the conditions of the dyeing. Those dyestuffs capable of giving union shades at the boil in two to three hours dyeing time have been considered satisfactory. As an example of the number of dyestuffs available, 60 out of 120 acid-dyeing metallized colors marketed are suitable by the above standard.

#### Different Techniques Required

Although the transfer technique just described is generally useful for the various classes of wool dyestuffs, it is not particularly well suited for applying the neutral-dyeing metal-complex dyes. This may be due to the unusual chemical structure of these dyes; for although they are anionic, they are not salts of sulfonic or carboxylic acids like other wool dyes. These dyes do not transfer as readily as other wool dyes, and the amount of sulfuric acid necessary for the transfer lowers the light-fastness of the dyestuffs on wool. Some change in the foregoing method was therefore necessary for this class of dyestuffs. Although designed to dye wool from a neutral bath, they are like other wool dyes in that they will dye Acrilan only in the presence of a mineral acid. They do not, however, require as much acid as the other classes of wool dyes.

In the light of this reduced amount of acid needed for applying these new metal-complex dyes to Acrilan, a few minutes reflection about the mechanism by which anionic colors dye wool and the two-fold action of the cation-active materials in producing a union between Acrilan and wool, will suggest the change that was made in the method described above. Early work in dyeing Acrilan, as well as more recent work on problems other than dyeing, had shown that Acrilan, like wool, absorbs acid which is not subsequently removed by rinsing with water alone. The important point about the need for acid in dyeing

(Continued on Page 68)



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#### Acrilan-Wool Blends

(Continued from Page 66)

Acrilan is that the acid is needed in the *fiber* and not in the bath. If the fibers are pretreated with acid and then rinsed off before dyeing, the Acrilan is left in a condition to accept the dye from the start, at a rate nearly equal to that of wool.

The chances of rapid and unlevel dyeing on acidified wool, or of dyestuff precipitation on the acidified fibers, are prevented by adding a nonionic dispersing agent, which retards the dyeing of the wool without affecting the dyeing of the Acrilan. Under these conditions (that is, of acid pretreatment followed by rinsing and dyeing in the presence of a non-ionic dispersant) Acrilan absorbs more dye than wool at low temperatures. Above 160°F., the dyeing rate of the wool increases sufficiently to bring the fibers into union. During the dyeing much of the acid absorbed

removed in the final rinse. By means of acid pretreatment the dyeing time in the presence of mineral acid, as well as the amount of acid necessary, are both materially reduced.

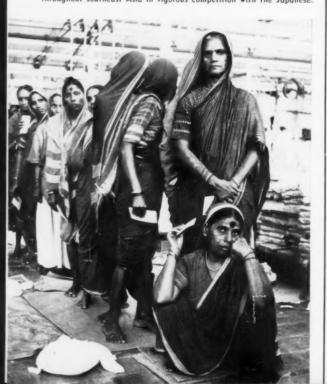
Because of the increase in the dyeing rate of Acri-

in the pretreatment diffuses into the bath and is

used in applying the acid-dyeing metallized colors. Here it was found necessary to add one to two percent sulfuric acid to the bath, as is customary in applying these colors to carbonized goods. By raising the temperature slowly to the boil, in order to make the most of the faster dyeing rate of Acrilan at low tempera-

lan after acid pretreatment, this method was also

PAYDAY IN AN INDIAN TEXTILE MILL: More than 56,000 women are employed in India's textile industry, one of the world's largest. In 1954, India's mills turned out more than five billion yards of cloth while cottage weavers produced another billion and a half yards. In recent years, India has been building its export trade in cloth throughout southeast Asia in vigorous competition with the Japanese.



tures, good unions are obtained after one and one-half hours at the boil. In heavy shades it is maybe necessary to add a cation-active material to the bath, to bring about a union. The reason for this is that the amount of dye absorbed by Acrilan at low temperatures is limited. Enough dye for heavy shades can be absorbed only if the dye penetrates the fiber completely, and this requires a temperature above 200°F., at which temperatures the wool dyes more rapidly than Acrilan.

The amount of acid to be used in the pretreatment depends on the acidity required to apply the particular class of dyes to wool. The neutral-dyeing acid or metal-complex colors require only one-half gram per liter, chrome dyes somewhat more, while the acid-dyeing metallized colors in heavy shades may need 2 to 3 grams per liter. The class of dyestuff to be used for a particular shade will be governed by the color-fastness at the required depth.

#### Practical Dyeing Details Given

Following this theoretical discussion of the methods of dyeing Acrilan-wool unions, the time is now appropriate to talk about the practical details in applying these methods, based on experience in dyeing more than one-quarter of a million vards of goods. The first dyeings on production scale were made using the transfer properties of a cationic dyeing assistant, whereby the wool was deliberately allowed to exhaust all of the dye from the bath, followed by steps to affect the transfer. Initially metallized acid and chrome dyes were used. In a typical operation, the well-scoured goods were first circulated in 1 percent of nonionic dispersing agent, such as Emulphor ON-870. Then the dyestuffs were added, followed by the cation-active material, such as Peregal TW or Nopcotex A. After circulating briefly, 2 to 4 percent formic acid was added and the bath was brought to the boil in 30 minutes.

The purpose of starting with formic acid was to avoid any possibility of precipitating dyestuffs which might be affected by sulfuric acid. Examination of the fabric at this time showed the wool to be heavily dyed, while the Acrilan was only lightly stained. An addition of 3 percent sulfuric acid was then made, and a second addition of 4 percent after 30 minutes at the boil. After a further 90 minutes dyeing time, examination of the fabric showed that the color had transferred to produce a union shade. This process was illustrated by the resultant fabric samples. The fabric consisted of bands of Acrilan and of wool, both in the warp and the filling, so that it has blocks of Acrilan, blocks of wool, and blocks of both fibers. The first sample showed the appearance of the blend before addition of sulfuric acid, while the second showed the appearance after the transfer has taken

Additions of color to adjust the shade are made in the usual manner, either at the boil or at 180°F., depending on the dyestuff. In the presence of 7 to 8 percent sulfuric acid, the additions of color distribute themselves rapidly and equally between the two fibers. Provided dyestuffs are chosen which have the same shade on both fibers, no difficulties in color matching have been experienced. After the dyeing is completed, the goods are cooled slowly to 175°F., rinsed, and given a neutralizing scour at 110°F. with ammonium hydroxide. Depending upon the reliability of laboratory formulas, the depth of shade, and the extent of control exercised over the dyeing, the total time will vary from 4 to 6 hours.

(Continued on Page 72)



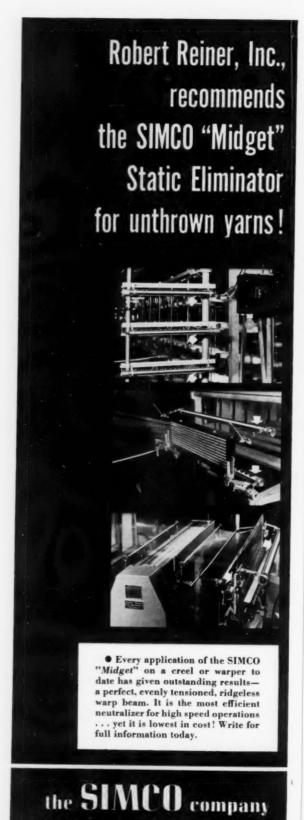
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#### Outlook

(Continued from Page 30)

Wholesale activity probably remained below a year ago during July. However, retail stock-sales ratios by end of August will be at a conservative level. Fall sales prospects based on current projections of consumer income, are favorable. It seems logical to conclude, therefore, that retailers:

May encounter more than the usual scarcities of wanted merchandise during Fall season.

May encounter less than the usual amount of promotional merchandise.

Retail buying policies for Fall season have been somewhat on conservative side, following disappointing sales at Easter and shortly after. It seems likely, however, that retail buying psychology by end of Fall season will be put on somewhat more liberal basis.

Over-Production Danger Lessening?—For a generation or more, the textile industry has been liquidating machinery. Preceding the last war, between 1938 and 1941, the industry went through transition from two-shift to 3-shift basis. Per capita fiber consumption, including industrial as well as consumer uses, has been increasing along with population. 1955 operations for textile industry, although they resulted in some over-production, nevertheless represented more than 90% of practical capacity for most sections of the industry.

These trends suggest that one of historic problems of the industry—periodic over-production—is becoming less of a risk, as potential demands approximate industry's capacity to produce on practical basis. For the first time in memory, the industry is reaching point where trend of profits may be a little more stable; where marketing based on styling and consumer satisfaction rather than on price concessions may become more effective; and where industry can give greater consideration to its capacity in relation to long-term consumer and industrial demands.

#### Tricot Bedsheet Standard Offered

A voluntary minimum standard for tricot bedsheet fabrics was approved recently by the Warp Knit Manufacturers Group of the National Federation of Textiles. The standard calls for 40 denier nylon yarn, a finished weight of 7.70 square yards per pound maximum, and provides further that the sum of wales and courses should be a minimum of 78. Fabrics conforming to this standard will be known as Type 160.

Fabric lighter than that provided by the standard will not fill consumer requirements nor perform satisfactorily as bedsheets, the Warp Knit Manufacturers Group believes. Although it is possible that the standard may be revised some time in the future, the Group believes that the proposed standard will be of assistance to consumers and retail buyers as a yard-stick.

The standard was approved by the Group upon the recommendation of the Tricot Sheet Committee headed by Charles Lovett, Deering, Milliken & Co., Inc., which tested fabrics of several weights prior to reporting its findings to the Group. Other members of the committee are J. Howard Bumsted, Glen Raven Mills, Inc.; Seymour Sahlein, Frank Ix & Sons; George Tunick, Bangor Mills, Inc.; Walter Turton, J. P. Stevens & Co., Inc.



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#### Acrilan-Wool Blends

(Continued from Page 68)

The table below lists typical formulas for black, dark brown, and navy shades using either chrome or metallized acid dyes:

#### TABLE I

#### TYPICAL FORMULAS FOR DARK SHADES ON ACRILAN-WOOL

| Navy:                      |      |
|----------------------------|------|
| Gycolan Blue GGL 200%      | 1.4% |
| Neolan Bordeaux BE         | 2.0% |
| Neolan Orange R            | 0.3% |
| or                         |      |
| Erio Chrome Blue SE Conc.  | 3.0% |
| Dark Brown:                |      |
| Neolan Brown TCN           | 3.0% |
| Neolan Black WA Conc.      | 0.8% |
| Vitrolan Dark Green B      | 0.6% |
| Vitrolan Yellow GR         | 0.6% |
| Erio Chrome Dark Brown PWS | 4.0% |
| Black:                     |      |
| Neolan Black WA Conc.      | 6.0% |
| Superchrome Black PV 125%  | 6.0% |

Calculation of costs of the above dyestuffs will show that they are very much less expensive than for many other synthetics blended with wool and correspond more closely to the dyeing of 100% wool.

The dyestuffs which are suitable for application by the procedure just described do not have adequate colorfastness in light shades for men's wear. Because of this shortcoming of available dyestuffs when the method was first introduced, light shades were dyed using basic dyestuffs for Acrilan and neutral-dyeing metallized colors for wool, applied in the same bath with ammonium acetate and with Peregal TW to avoid co-precipitation of the two classes of dyestuffs. When the value of acid pretreatment in applying neutral-dyeing metal-complex colors was learned, the process of union-dyeing in light shades was greatly simplified.

In following this latest procedure the well-scoured goods were treated 20 minutes at 200°F, with 0.5 to 3 grams per liter sulfuric acid, the higher concentration being required for heavy shades. The goods were rinsed and then circulated with one-half percent Emulphor ON-870 (or similar non-ionic material) before addition of dyestuff. When using acid-dyeing metallized colors, two percent sulfuric acid was added to the bath after the dyestuffs. The temperature of the bath was gradually raised to 160°F, in 20 minutes, and held at this temperature 30 minutes. Under these conditions Acrilan dyed more heavily than wool.

The temperature was then raised to the boil to increase the relative dyeing rate of the wool, and union shades were obtained after one hour at the boil. After dyeing, the goods were cooled, rinsed, and neutralized. A comparison of the dyeing times and quantities of materials used in the two procedures will show the savings in costs of materials and time in the latter method.

The results of the dyeing are dependent on proper choice of dyestuffs, selected not only for suitability for use with mineral acid and cation-active materials, but also to give the same shade on both fibers and for the greatest colorfastness.

The following table lists a few of those dyes which have been found to be most satisfactory on a commercial scale in all of the above respects. Concerning colorfastness it can be said as a generalization that wool dyestuffs have consistently better wetfastness on Acrilan than on wool, while the lightfastness on Acrilan, except in selected cases, is usually slightly less.

#### TABLE II

#### DYESTUFFS RECOMMENDED FOR DYEING, ACRILAN-WOOL AFTER ACID PRETREATMENT

#### Metallized Acid Dves:

Gycolan Yellow BRL
Neolan Yellow GR
Neolan Brown TCN
Chromolan Red 3RB
Neolan Bordeaux BE
Gycolan Blue 2GL
Vitrolan Dark Green B
Chromolan Grey G
Neolan Black WA
Palatine F. Black WANA

#### Acid Dyes:

Chinoline Yellow KT Ex. Wool F. Orange GA Alizarine Geranol B Sandocryl Blue GLCI Genalan Brill, Blue G

#### Neutral-Dreing Metallized Dres:

Cibalan Yellow GRL
Cibalan Yellow 2BRL
Cibalan Brill. Yellow 3GL
Capracyl Yellow 3RD
Capracyl Yellow NW
Cibalan Orange RL
Cibalan Red 2GL
Capracyl Dark Brown B
Cibalan Violet RL
Cibalan Blue BL
Cibalan Grey 2GL
Capracyl Gray GN

Although the use of a cation-active material was not stated to be necessary in applying neutral-dyeing metallized colors after acid pre-treatment, such materials provide valuable insurance in instances where the dyeing has not gone according to plan and the wool dyes heavier than Acrilan. The addition of Decomine, manufactured by Arkansas Co. together with small amounts of sulfuric acid, has proven effective in bringing the two fibers into union.

It is interesting that, although Acrilan can readily be dyed in union shades with wool using wool dyes, it is also possible to dye wool and leave Acrilan white, even with some of the same dyestuffs used for union-dyeing. The method was hinted at earlier in speaking of the behavior of anionic leveling agents on the two fibers. The procedure is to pretreat the blend with one of the materials used to resist nylon, along with an organic acid. Because of their greater affinity for Acrilan than for wool, or their slower diffusion rate into the hydrophobic fiber, they prevent entry of the dyestuff into the acrylic fiber. The dyestuffs are then applied to wool using an organic acid at temperatures below the boil.

### Courtaulds' answer to the demand

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No other colors in the blue-green family can match the intensity and purity of Coloray turquoise and peacock blue.

These ultra brilliant colors are incomparable for dramatic flecks, nubs, and other decorative effects in fabric. They are highly practical for blazing solids that clean as bright as new. Because . . . like all Coloray colors . . . turquoise

and peacock blue deliver peak colorfastness as well.\* What's the reason? Courtaulds' method of caging color inside Coloray rayon fiber. Courtaulds' method of solution-dyeing. The method that also insures lowest color cost for highest color performance.

In every way, it pays to work with Coloray.

### \*Tests under AATCC procedures prove amazing fastness powers of Coloray Turquoise and Peacock Blue.

Lightfastness ratingbetter than Class L8, top AATCC rating-no fading after 500 hours of exposure to South Florida tropical sunlight.

Washfastness rating -Class 5 - no color change or staining under severest wash conditions - at 180°with alkaline soap and bleach agent.

Dry crocking rating -Class 5 - no rubbing off of color perceptible whatsoever. Wet crocking, just as good in Turquoise, about Class 3 in Peacock Blue.

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### Paine and Courtaulds

(Continued from Page 32)

In August, 1953, Courtaulds (Alabama) made news in the American textile world by bringing out its spun-dyed staple tradenamed "Coloray". Back home in England the parent company had been outstandingly successful with colored staple. Inspired by this success, the Alabama company began a vigorous merchandising and development program to enlarge the market for this new textile material.

Meanwhile a fiber research laboratory was built at the plant site in Alabama at a cost of \$500,000 and with it Courtaulds was able to bring to bear on the task of improving rayon staple all the impressive know-how in rayon accumulated in 50 years of successful production of the fiber in England. To supplement these efforts, the company is now building, at a cost of \$1,000,000, a textile research and development unit.

### Capacity Growth Was Rapid

No sooner had the Alabama plant reached its initial capacity of 50 million pounds than the company announced that it would expand to bring capacity to 100 million pounds. Later another 50 million was added to reach Courtaulds' present capacity of 150 million pounds.

Paine meanwhile had succeeded Colonel Davies as president of the company. In the summer of 1954 he had the satisfaction of hearing his boss, Sir John Hanbury-Williams, chairman of Courtaulds in England announce, on a visit to Alabama, that the new plant had satisfactorily reached the profit-earning stage.

The people at Courtaulds both at home in England and here in the United States believe in painstaking, step-by-step development of promising end uses for rayon staple fiber. An example of this approach is found in the work done in England by Boyd, Butterworth and Tattersfield in rayon-cotton blends for work clothing and other utility garments. (The results of their work are reported in the November and December 1955 issues of Modern Textiles Magazine.

Or take another significant example. Salesmen for Courtaulds' Alabama plant working to interest cotton mills in cotton-rayon blended fabrics can dip into their brief cases and pull out a fat book of fabric swatches. The swatches they are able to show are carefully arranged fabric samples of a given construction with varying amounts of rayon. These swatches, needless to say, point up effectively the positive advantages rayon brings to a fabric when combined with cotton

Along with resourcefulness in research and patient care in developing new end uses, the parent company of Courtaulds' Alabama operation has behind it an impressive record of successful management. Long before "artificial silk" was even dreamed of as a commercially feasible idea, Courtaulds had made a great and lasting success as England's foremost producer of silks.

In a century of growth, the company had weathered many a depression, adversity and economic crisis. It had achieved solid stature when in 1904 its far-seeing directors, spurred on by the company's managing director, the remarkable Henry G. Tetley, bought the rights to manufacture viscose rayon in Great Britain for 25,000 pounds.

Since it entered rayon manufacture, Courtaulds has been even more successful than in its days as a silk weaver. Today, Courtaulds ranks easily among the first ten British industrial organizations.

Besides rayon, Courtaulds and its associate companies in England produce nylon, acetate and polyethylene as well as men's wear, textile machinery and cellophane. Along with these activities, the company remains true to its origins as one of England's best-known weavers.

As to the future of rayon staple fiber in the United States, Charles Paine and his associates at Courtaulds (Alabama) are decidedly optimistic. Courtaulds in England has long been a pioneer in combining rayon with cotton in spun yarns. Probably nobody knows more about how to use these combinations in fabrics than Courtaulds' technicians. In the United States, therefore, the vast existing cotton industry, Courtaulds people believe, offers an endless series of opportunities to widen the use of rayon staple in cotton blends.

### Improved Rayon Staple Foreseen

Then, as Paine himself points out, another important reason for optimism about rayon staple's future is the virtually assured likelihood that the fiber will be greatly improved in the years ahead. There will be, he expects, improvements in dry and wet tenacity, dimensional stability, resistance to wear and laundering and other advantageous properties. High tenacity staples are already obtaining wide acceptance in the industrial field in England and Germany. Other improved types will make their appearance in due time. In short, Paine expresses the opinion that there is no reason why there should not be different kinds of rayon staple each with special properties for special end uses.

In the years ahead, it would seem that Courtaulds (Alabama) will proceed to steadily growing sales volume along a path already carefully charted by Charles Paine and his associates. The direction that path will take is strongly suggested by the successes already achieved by the company's colored staple in providing basic materials for many new, exciting fabrics for men's and women's fashions. An example which comes to mind is J. P. Stevens' "Shades of India", an all-rayon madras which in a delightfully apt way captured the popular East Indian feeling in fashions this past season.

Or take another example of the company's success with colored staple. A few years ago the auto industry went in strongly for a dazzling variety of hitherto unheard of colors for car exteriors. In line with this new obsession with color and decor, the auto stylists wanted interior upholstery to blend with, match or harmoniously complement the body colors.

But the shades they wanted, they discovered, were not easy to get in fabrics. Courtaulds technicians came forward with help. By working closely with the auto people, Courtaulds showed them how they could get the variety of new shades they wanted in interior fabrics by stock blending colored staple from the company's range of 19 colors. And of course, the resulting all-rayon and rayon blended fabrics had the property, so necessary in autos, of durable fastness to light.

Another new important direction the company will pursue in all likelihood is the market for natural staple in a widening variety of fabrics for work clothes. In both these directions and many others that the future may bring, one thing is certain: the effort behind them will be first brilliantly thought out, next painstakingly planned in advance and then executed with the sober, honest caution and surefooted skill that are the invariable marks of Courtaulds' way of doing business.

### Engineering Soction

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... For More Than 70 Years

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### Above—"BLUE SATIN FINISH" PORCELAIN GUIDES.

An exclusive development of Mitchell-Bissell—guides with this finish are more resistant to thread wear than any glazed porceloin guides ever offered the industry. "Blue Satin Finish" Guides, instead of being shiny and glasslike, have a surface of thousands of small rounded grains closely packed together. Reduced wear and longer guide life result because, by breaking the continuity of contact between yarn and guide, friction is reduced. \* U. S. Pat. No. 2,152,136.

#### Left-WHITE GLAZED PORCELAIN GUIDES.

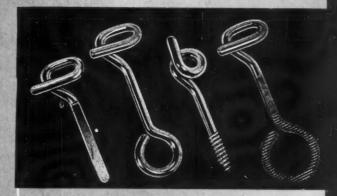
The Mitchell-Bissell Company originated the use of porcelain as a thread guide for the textile industry. The white Glazed Porcelain Guides shown here are representative of thousands of patterns that have been sold to all branches of the textile industry since this company was founded over seventy years ago. Improved in quality from time to time they are still "standard."

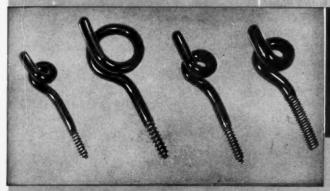
### Right-CHROMIUM PLATED STEEL GUIDES.

The plating on Mitchell-Bissell Chromium Plated Steel Guides is harder and denser than on any other wire guides. Our methods of fabricating and polishing develop a surface smoothness, with a mirror finish far beyond usual commercial standards. Because of their superior resistance to thread wear these guides are used extensively on machinery for processing rayon and also for many other severe applications. Also available in Satia finish.

#### Below-ENAMELED IRON GUIDES.

Where wire guides are desired, and service conditions do not require chromium-plated guides, our Enameled Iron Guides give exceptionally good service, with a low initial cost. Made with the care and craftsmanship that are standard practice on all Mitchell-Bissell products, these are recommended as centering and ballooning guides, and for cotton, woolen and other soft yarns.





### MITCHELL BISSELL CO.

TRENTON, N. J.

Southern Representative: R. E. L. Holt, Jr., & Associates

Greensboro, N. C.

### REPORT FROM EUROPE



BY SPECIAL CORRESPONDENT

### **British Finishers Want Lower Dye Prices**

**European Dyestuffs Prices Sag**—PARIS: European textile manufacturers, especially the British, will be watching closely activity of a special group of the Organization for European Economic Cooperation here which just set to work to study the dyestuffs market. Swiss OEEC delegate, F. Brichet, will draw up a report covering last year and the first part of 1956 to see how falling textile demand for dyestuffs fits into Europe's threatening over-supply, priceweakening situation.

For most European textile manufacturers, softening of the dyestuffs market has meant a slight drop in prices. But Britain, which traditionally protects its domestic dyestuffs producers, now turns out 90% of all the dyes it consumes—mainly in the textile industry. This protection, according to British textile finishers, has meant that the UK has seen dye prices rise 5%—at a time when Continental textile competitors have been getting the bleaches and colors cheaper. Some British textile men are now talking of withdrawing their support from dyers' protectionism unless lower prices are forthcoming.

General Survey Also Underway—At OEEC's recent annual meeting, the 16-nation group also decided to set up a special group of inquiry "into problems facing the textile industry." This body is headed by Italian delegation leader, A. Pini, assisted by Austrian Dr. F. von Mayer-Gunthof. This new survey is an outgrowth of a study released last winter and reported on this page in our April (page 76). The study stressed the difficulties facing Europe's man-made fiber industry. The Pini group will try to come up with tangible suggestions early in 1957 on how the textile industry, both nationally and through international cooperation, can meet the long-term threat spelled out in last winter's survey.

Another international group, the International Rayon and Synthetic Fibers Committee, also headquartered here in Paris, recently compiled a study on textiles made from protein. (In the U. S. Vicara, made from zein, is an example.)

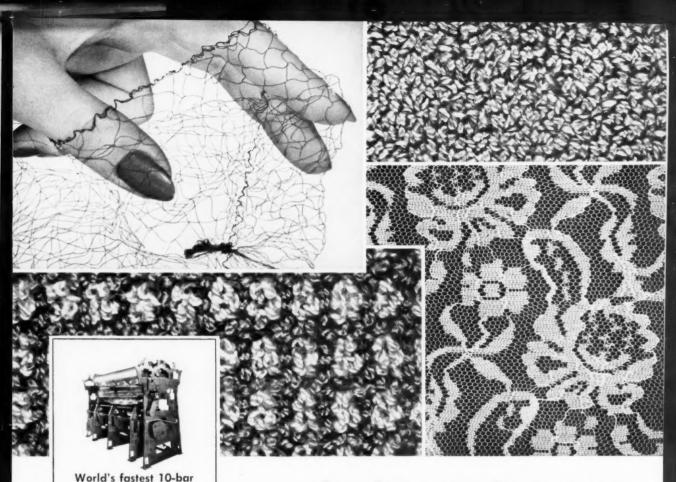
Belgium, United Kingdom and Italy are producing various protein fibers commercially. Belgians and Italians are using casein under trademarks Lanital and Merinova, respectively. UK is making Fibrolane and Ardil from peanuts. These fibers are being successfully blended with nylon, Orlon and rayon.

**A.K.U. Expands Abroad**—Holland's big rayon and man-made fiber concern A.K.U. is pushing into Austria and spreading its influence in the U.K. An Austrian firm, Erste Oster-reichische Glanzstoff-Fabrik A.G., at St. Polten, recently approved an agreement which will see A.K.U. take it over through majority stock control. The largest Austrian shareholder is Creditanstalt-Bankverein whose managing director, Dr. H. Joham, is chairman of the company.

Until a few months ago, British Nylon Spinners has been only firm making polyamide fibers in the U.K. Then British Celanese started up output of Celon whose production has not yet reached commercial stage. And now British Nylon Spinners has licensed British Enka Ltd., an affiliate of A.K.U., to produce nylon in U.K. It is reported in London that this latest move in nylon field will result in more yarns for industrial purposes.

**New Belgian Nylon Cord Plant**—In Belgium, Fabrique de Soie Artificielle d'Obourg, associated with the big Fabelta concern, has announced that it would construct a nylon tire cord yarn plant. This firm has already been testing acrylic fibers. In Germany, another acrylic fiber, Dralon, is being produced by Farbenfabriken Bayer A. G., at its Dormagen plant.

German Man-Made Output Grows—Germany has developed into West Europe's largest man-made fiber producer with 14,832 tons last year (over twice 1954), and 1956 production expected to go up some 50%. However, Vereinigte Glanzstoff, principal German rayon producer, in its last report showed a less promising situation. During the first half of 1956, sales dropped over 11 million marks to 178.1 million. But the firm expects that, as output of newer man-made fibers increases later this year, demand would rise from mixed fabric manufacturers, both cotton and wool. A new nylon tire cord plant is also being built by Glanzstoff.



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These are just a few of the advantages that account for the popularity of the Kidde Knitter, both with the knitter who specializes in one type fabric and the knitter who depends on flexibility to meet the requirements of his trade. If you specialize in any one of the following fabrics . . . elastic fabrics, tulle and various types of net, lace and lace edgings, shoe cloth, laundry nets, sport shirtings or carpeting . . . or if you need versatility encompassing many of these types . . . the Kidde Raschel Type Knitter can give you faster, more economical, more dependable production.

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Shown with me here is my son Richard who came into the business with me when he got out of service.

I am very proud that he has taken such a keen interest in the progress of our company and that he has

become one of the most capable people in the sample card business. In due course, I expect to retire and turn the company over to him to run. After all, I have been here in the Worth Street textile community for nearly forty years and he has the fresh, eagerness of youth that is good for any business.

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GREENVILLE, S. C.
OCTOBER 1st to 5th, 1956

### 40" DW LARGE-PACKAGE WARPER

The general idea of larger packages, popular in recent years, has led to the development of a new Super-Speed Warper capable of winding beams up to 40" head diameter. This machine, which provides economies through producing more loom beams per set, will be demonstrated in action.

### 66" FSH WARP DRAWING MACHINE

This Barber-Colman machine draws-in new warp through drop wires, heddles, and reed all in one operation. Selection is accomplished automatically from a metal pattern strip punched in accordance with the designer's draft. Numerous applications and advantages will be shown.

### MODEL "M" WARP TYING MACHINE

This new type of machine, which is made in ten sizes from 36" to 126" length, ties-in the *full width* of the warp in one operation. It works directly back of the loom, and is available in several types to handle cotton, spun yarns, filaments, or synthetic yarn from a flat sheet or from an end-and-end lease.

see these Cost-Saving Machines in Operation

**BOOTH 254** 

BARBER-COLMAN COMPANY . ROCKFORD, ILLINOIS

### For the DYER and FINISHER

### **New Fabric Preservative**

A new process for the preservation of cotton, linen, rayon, burlap and sisal by chemical modification of the cellulose molecule has been introduced by National Cylinder Gas Co. Only a simple treatment using a water solution is required. This treatment, according to National Cylinder, has a minimum effect on the strength and other properties of the fabric treated. The treated fabric can be dyed, washed, and otherwise handled as if untreated. There is no odor, stiffness or stickiness.

The new process involves the use of a water solution of a copper compound which is then treated to cause a fixed union with the material by chemical reaction of the copper compound with the cellulose molecule.

Tests on the new process conducted at the Southern Research Institute, Birmingham, Ala., have indicated that the new process imparts to fabrics superior ability to withstand outdoor exposure and soil burial tests.

### **New Wetting Agent**

The Johnson-March Corp., has developed an anionic surface active agent known as Isomal 265. It can be used in the processing of textiles as a wetting and rewetting agent, penetrant, detergent and emulsifier. It is specially formulated to reduce processing time. The fluid is a sulfonated ester type liquid, said to have a lower surface tension than any other similar product. Isomal 265 is clear in appearance, has a neutral pH factor and specific gravity of 1.088 at 60°F.

### New Black Anthraquinone Dye

National Aniline Division, Allied Chemical & Dye Corp., has added Carbanthrene Direct Black 3G Double Paste to its line of vat dyes. The dye is said to be a nondrying paste, producing greenish-black dyes on cotton and rayon. The dye may be applied by the various pigment impregnation methods as well as the reduced bath method, and is suitable for printing.

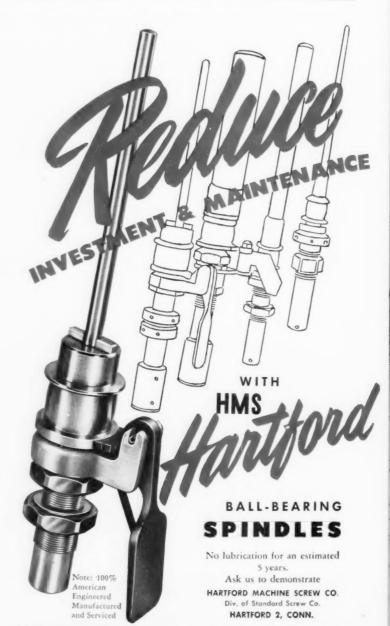
According to the company, the new black is unaffected by presence of metals in the dyebath and is suitable for use in all types of dyeing equipment. The new dye exhibits maximum fastness to most wet processing, including cross-dyeing, stoving and perspiration. The product is said to be suitable for the production of resin finished dress goods and suitings, as well as materials that are subsequently to be rubberized.

#### **New Textile Softener**

American Cyanamid Co. has announced the availability of their textile softener, Cyanatex SB-100, said to have good resistance to discoloration in aging. According to the company, SB-100 has been run through exhaustive heating tests to prove its resistance to discoloration. It is also said to give unusual softness and lubricity to all synthetic fibers, cotton, and other natural fibers, and requires very low concentrations for maximum softness.

The product is made of a synthesized ester derivative of sulfosuccinic acid, neutral in reaction and anionic in nature. It is reported to be compatible with anionic and nonionic agents, starch and salts commonly used in textile finishing, and to give less condensation in tenter frame housings and loop dryers than most other softeners on the market.

For further information write the editors



SOUTHERN DIVISION, ROUTE 3, BOX 314, GREENVILLE, S.C.

### **Tricot Scouring Agent**

Dexter Chemical Corp. is offering a scouring agent, Dextrol Scour SO-17, for use on nylon and acetate tricots and marquisettes in Burlington machines. According to the company, the agent is completely emulsified, high-boiling, non-toxic solvent containing wetting agents and detergents.

Because it produces an extremely fine solvent-emulsion in all dilutions, it is said to eliminate free solvent in the bath and residual odor in the goods. Although this

material also removes dirt and grease from fabrics processing in becks and jigs, Dexter reports that its effectiveness in the Burlington machine is enhanced by the fact that it does not foam.

### Scarlet Acetate Dye

Sandoz Chemical Works offers Artisil Scarlet GFL Ultradispersed Pat., said to dye acetate in brilliant yellowish scarlets possessing exceptional light and wet fastness. According to Sandoz, Artisil Scarlet GFL dyes nylon, polyester, and acrylic fibers, with high temperature processes giving the best results on the latter. The shade on nylon is said to be bluer than on acetate. Triacetate fiber is dyed fast to light and washing, dyeing at the boil being the preferred method.

### Improved Sequestering Agent

Refined Products Corp. offers a dry form of Perma Kleer 80 called Perma Kleer 80 Crystals. The product is non-hygroscopic and is suitable for dry mixtures. It combines with water to form a characteristic crystal which is no longer hygroscopic.

It is said that the product has eliminated undesirable features of the conventional drum or spray dried product, such as caking during storage, picking up moisture on exposure to humid atmosphere, or causing mixtures of powdered soaps or detergents to become hygroscopic where a sequesterant is used. Perma Kleer 80 Crystals is said to form stable chelates with all divalent metal ions and most trivalent metal ions. Ferric ion is chelated in acid and neutral media.

### Water Repellent

Textile Adjuncts Corp. has announced that their aerosol product, Water-Skipper, has been found to have a new application in textile mills, other than the recommended use of the product as an on-the-spot water repellent.

According to the company, the new use arose from successful tests that have been completed in a number of finishing mills, where drying cans and tenter frame clips were treated with light, repeating Water-Skipper applications. Initial results have shown that these treatments on the metal units have prevented resin build-up by reducing resin deposit.

### New Wetting Agent Introduced

Developed primarily for use in wet processing textile yarns and fabrics, Synthrapol KB is a product of Arnold, Hoffman & Co., Inc., Providence, R. I. According to the company, Synthrapol KB is a 97% non-ionic surface-active agent that retains over a wide temperature range fast wetting and good solubility, resistance to hydrolysis, and stability in acidic solutions. Being chemically inert, the wetting agent is said to be highly suitable for use in dye liquors, and to be of value both in the application of basic dyes and in the development of napthol dyeings. The agent does not precipitate basic dyes, and its presence in developing baths overcomes the tendency of napthol-prepared fabrics to float.

For further information write the editors



### REPORT FROM JAPAN



### Japanese to make new polyvinyl fiber; Price troubles afflict rayon producers

By B. Mori

OSAKA—Manufacture of polyvinyl chloride fiber will soon be started in Japan by Teikoku Rayon Co. Initial output will be about five tons a day. Fish nets, ropes, filter cloths and other industrial uses are seen as the initial market for this fiber by Teikoku executives. Made in multifilament form and tradenamed "Tevilon", the fiber is expected later to be successfully used for insect screening, upholstery and non-inflammable curtains. Teikoku will produce this fiber initially four denier per filament, in 60 or 70 filament constructions. Some polyvinyl chloride fibers have already been produced by Toyo Chemical Co. and Kureha Chemical Co.

**Coals to Newcastle**—Strange as it may seem to Americans, the Japanese are being threatened with rayon imports, and by their own Government, too. Only a few months after tangling unsuccessfully with the rayon industry over its demand to curtail staple production expansion plans (see this page in March and April), the Ministry of International Trade and Industry has again stirred up a controversy over domestic prices of filament rayon yarn.

MITI has no statutory authority to set price ceilings in the domestic market; but decided, nonetheless, that domestic prices were "too high" while export prices were much lower. The Ministry threatened to issue licenses to import rayon yarn to bring the local price down. This import threat has been used before by MITI to induce lower prices for cotton yarn and textiles, and also as a roundabout means of enforcing its will on other industries, when clear legal means are lacking.

**Two-Price System in Force**—Public pronouncements made by MITI officials on the rayon yarn price sounded at times as though the existence of two prices was itself undesirable; and that the Japanese consumer was being victimized. This attitude came as a surprise to many observers, who recalled that the Japanese Government now has in force various export-promoting schemes which have the effect of subsidizing low export prices, and taking the difference out of the pocket of domestic consumers. The cotton and wool "link" systems are examples.

At one point rayon manufacturers appeared to be offering to cancel some export orders and throw yarn on the local market to bring prices down—a gesture which appeared strange to those who hear continually of Japan's need to export more.

None of this disputes the fact that yarn prices have been rather high in relation to the general price level. It only serves to indicate that rather heavy-handed methods are sometimes used to force adjustments.

The last word is that yarn producers and distributors are considering an agreement for the purpose of controlling prices among themselves.

Cotton Exports Ahead of Last Year—Cotton textile exports in the first half of this year were well over 600 million yards compared with 500 million in the first half of 1955. Nonetheless, signs point to some difficulty in reaching this year's goal of about 1.1 billion yards, because of smaller advance contracts for the second half. Exports to the United States in the first six months were 78 million yards, out of the year's quota of 150 million. But here, too, signs point more and more to difficulty in reaching the quota figure.

**Rayon Fabric Exports Rising**—Exports of filament rayon fabrics were over 200 million yards, 50 per cent above the comparable 1955 figure; while spun rayon cloth shipments reached 300 million yards, a gain of 35 per cent. About one million yards of filament and spun goods combined were shipped to the U. S., about 50 per cent ahead of the first half of 1955.

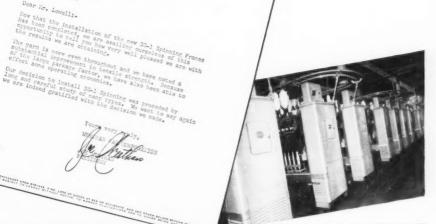
Knit Goods Shipments Also Rise—Latest figures confirm earlier indications, reported on this page, that knit goods are coming up strongly in exports to the U. S., with sweaters and gloves leading. The cotton blouse business has fallen off and men's shirts are on the increase.

The industry has agreed to put a brake on mounting exports of cotton/rayon damask tablecloths to the U. S., principally because the market has not been able to absorb them fast enough. Annual shipments will be limited by quota to a figure well below the 1955 peak year.

### about SACO-LOWELL **GWALTNEY SPINNING**

THE ONLY REVOLUTIONARY SPINNING IMPROVEMENT WERTHAN BAG CORPORATION IN 100 YEARS

WERTHAN BAG CORPORATION is "VERY WELL PLEASED" with their New SACO-LOWELL GWALTNEY SPINNING



### THIS OPERATING INFORMATION CONTAINS THE FACTS . . .

Nr. W. F. Lowell, Vice-President Secondor 10, Jase.

Dear ir. Lowell: ..

The state of the s

January 4, 1955

A TYPICAL WERTHAN SPINNING ROOM ORGANIZATION

| WARP  |                          |                |                  |              |                        |                        |                      |  | FILLING         |                          |                |                  |              |                        |                        |                      |  |
|-------|--------------------------|----------------|------------------|--------------|------------------------|------------------------|----------------------|--|-----------------|--------------------------|----------------|------------------|--------------|------------------------|------------------------|----------------------|--|
| Count | Twist<br>Multi-<br>plier | Twist per Inch | Spindle<br>Speed | Ring<br>Size | Trav-<br>eler<br>Speed | Front<br>Roll<br>Speed | Effi-<br>ciency<br>% | Net<br>Production<br>per Spindle<br>per Hour | Count           | Twist<br>Multi-<br>plier | Twist per Inch | Spindle<br>Speed | Ring<br>Size | Trav-<br>eler<br>Speed | Front<br>Roll<br>Speed | Effi-<br>ciency<br>% | Net<br>Production<br>per Spindle<br>per Hour |
| 12    | 4.30                     | 14.88          | 8600             | 3.00         | 6754                   | 184                    | 94                   | .087   | 10              | 4.00                     | 12.65          | 6000             | 3.00         | 4712                   | 151                    | 93.5                 | .088   |
| 16    | 4.75                     | 19.00          | 9100             | 3.00         | 7147                   | 152                    | 95                   | .056   | 14.25           | 3.75                     | 14.13          | 8600             | 3.00         | 6754                   | 193                    | 94                   | .079   |
| 20    | 4.75                     | 21.24          | 9100             | 3.00         | 7147                   | 136                    | 95.2                 | .041   | 20              | 3.75                     | 16.77          | 8600             | 3.00         | 6754                   | 163                    | 94.5                 | .048   |
| 24    | 4.75                     | 23.27          | 9100             | 3.00         | 7147                   | 124                    | 95.4                 | .031   | 22              | 3.75                     | . 17.59        | 8600             | 3.00         | 6754                   | 156                    | 95                   | .042   |
| 26    | 4.75                     | 24.22          | 9100             | 2.75         | 5109                   | 120                    | 95.6                 | .028   | 26              | 3.75                     | 19.12          | 8600             | 2.75         | 6754                   | 143                    | 95                   | .033   |
| 30    | 4.75                     | 26.02          | 9100             | 2.75         | 5109                   | 111                    | 97.0                 | .022   | 36              | 3.75                     | 22.50          | 8600             | 2.75         | 6754                   | 122                    | 96                   | .021   |
|       |                          |                |                  |              |                        |                        |                      |  | 6.75<br>Part Wa | 4.00                     | 10.39          | 4600             | 3.00         | 3612                   | 141                    | 93                   | .121   |



60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD and SACO, MAINE, and SANFORD, N. C. SALES OFFICES: CHARLOTTE . GREENSBORO . GREENVILLE . ATLANTA

# VEREL

the new Eastman modified acrylic

Is softness important to you? Then VEREL is a fiber you'll want to investigate. Its kind, soft hand combined with other unique properties make it especially useful for jobs like these:

Knitwear. Alone or in blends, VEREL produces sweaters with an especially soft, luxurious hand. And the remarkable whiteness of the fiber makes it easy to obtain a wide range of clear pastels. Its good dimensional stability and whiteness are also valuable in blends with cotton for T-shirts, underwear and sleepers. A high moisture regain of 3.5% to 4% makes VEREL especially comfortable for knits of this type, as well as men's and children's socks.

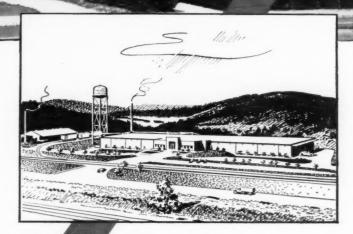
Wool-blend apparel. VEREL adds luxurious softness to wool blends...improves their wrinkle recovery and crease retention. What's more, the addition of VEREL produces a stronger fabric, permits warmth without weight in line with the current trend to lighter men's apparel. And unlike some man-made fibers, VEREL has a low pilling tendency.

Pile-type tabrics. VEREL, either 100% or blended, gives remarkable new luxury and softness to the face of fur-type fabrics.

Even such a brief preview will show you that VEREL is a specialist —a fiber with special properties that make it particularly good for special end uses. If you have a specific job in mind, ask your nearest Eastman sales representative for the full story on VEREL, the fiber that fits the job.

# When You Visit Southern Textile Show





We extend a cordial invitation for you to visit our Booth, and also our Southern Shuttles Division, which is located only a few minutes from Textile Hall.

This will be an excellent opportunity for you to see how we build fine quality into our products from selected raw material through every manufacturing process.

If you will kindly express your wishes to someone at our booth, one of our representatives will be glad to take you for a tour through our Greenville Plant.

Sincerely,

Harry W. Fehr

Harry W. Fehr, President

Stehedgo

STEEL HEDDLE MFG. CO.
PHILADELPHIA 32, PA.
SOUTHERN SHUTTLE DIV.
GREENVILLE, S.C.
SOUTHERN SHUTTLE DIV.

Other Plants and Offices: Granby, Quebec, Canada—Lawrence, Mass.

Greensboro, N.C.—Atlanta, Ga.—Textile Supply Co., Dallas, Texas

Albert R. Breen, Chicago, Ill.



One of a series featuring national advertisers who are Iselin clients

Anvil Brand, Incorporated, makers of "Work'n Play" clothing, is one of the notable manufacturers who factor with William Iselin & Company, Inc. We are proud of our association with these successful companies. Iselin factoring has long been a basic tool of successful operation in many industries, whether for financial, credit or consultative services.

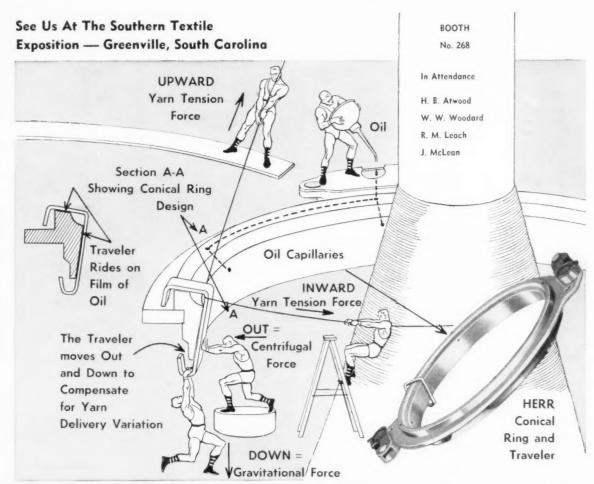


Atlanta

357 FOURTH AVENUE, NEW YORK 10

Grand Rapids

MODERN TEXTILES MAGAZINE



## HERR Conical Ring Design forces the traveler out and down, equalizing the yarn tension!

### **RESULTS**

- Yarn breakage is prevented
- Yarn is smoother
- Heavier More Uniform Doffs
- Minimizes Wear on Ring and Traveler

Ask for belp on your problem.

The Herr Conical Ring Design equalizes the yarn tension forces (upward and inward) and the Traveler centrifugal and gravitational forces (outward and downward). These opposing forces are balanced and the traveler rides on the ring with minimum frictional contact.

Reservoirs feed oil to the capillary openings. The Traveler distributes this oil to form a microscopic film on which it rides permitting maximum spindle speed with minimum Ring and Traveler wear.

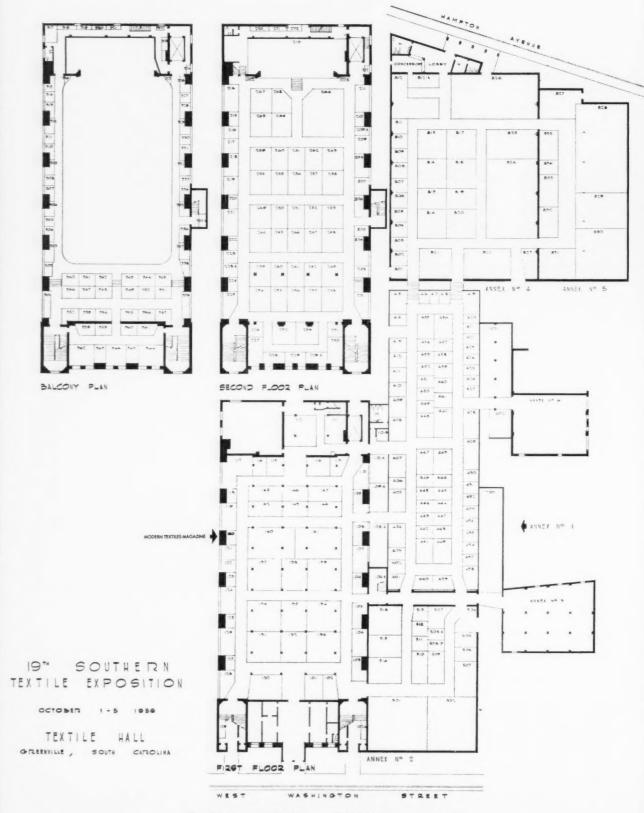
If you spin or twist confer with Herr.

# HERR

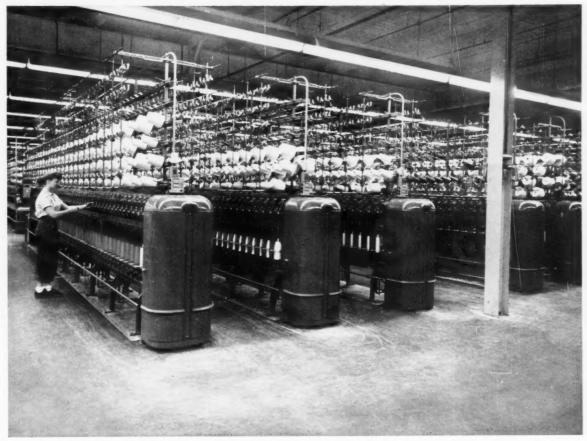
Special Showing
of latest developments
of Herr Conical Rings
to handle TUFTED YARNS,
TIRECORD, WOOLENS & BLENDS

MANUFACTURING CO., INC.

308 FRANKLIN STREET, BUFFALO 2, NEW YORK



For Listing of Exhibitors & Exhibits see page 94



Leesona Model 10 Ring Twisters at the Chatham Manufacturing Company mill in Elkin, N. C. Part of a

Leesona 2600-spindle installation used in producing the famous Chatham automotive and apparel fabrics.

### Why CHATHAM selected Leesona® Ring Twisters

Mill executive tells how Model 10 machines help maintain quality and cut production costs

Carlyle Summey, Worsted Division Manager at Chatham, says:

"Our fabrics require many combinations of yarns—natural, synthetic and metallic, in ply constructions of from 2 to 6 ends. Leesona Model 10 Ring Twisters do a great job of top-quality twisting for us. Their single and ply end individual stop motions and individual tensioning of each end in the creel make the perfect combination for high efficiency twisting. We get big, well formed

take-up packages from our Model 10's — and we get them fast, which saves us time and money in our subsequent coning, quilling and warping operations.

### **Investigate Leesona Machines**

Get all the facts. Find out how Model 10 Ring Twisters, or other Leesona Machines, can cut your operating costs and improve your product quality. See your Universal representative or write direct.

23.5.20



### UNIVERSAL WINDING COMPANY

P. O. BOX 1605, PROVIDENCE 1, R. I.

Sales Offices: Boston • Philadelphia • Utica • Charlotte • Atlanta • Los Angeles Montreal, Hamilton, Canada

Winding and Twisting Machinery for Natural and Synthetic Yarns

### Where Quality Counts...

WARP



SELECT A TYING MACHINE

The TITAN Warp Tyer is known throughout the industry for its top quality performance—its ease of operation-economy-and versatility.

The TITAN "leased-to-flat" method of tying, too, has won wide acclaim in cotton and spun rayon mills. By being able to tie (actually select) from an end-&-end lease in the pattern to the flat sheet in the new beam, the TITAN contributes to produce quality warps—straight warps with no crossed ends in the dropwires.

The TITAN ties warps of any width or fiber in ONE BITE and provides big production with multiframe set-up. It is versatile because it ties "leased-to-flat", "leased-to-leased", or "flat-to-flat" warps. And it is easy to operate with very low upkeep cost.

For Maximum VERSATILITY. ECONOMY and PRODUCTION -You Can't Beat The TITAN!

You are invited to see the TITAN machines and the TITAN "leased-to-flat" method of tying demonstrated—a method which gives increased loom efficiency and reduced cloth seconds—at our booth 503 during the Southern Textile Exposition in Greenville, S. C. from October 1-5, 1956.

Photo Courtesy The John P. King Mfg. Co., Augusta, Ga.

Three available TITAN models: Model GK-6A, universal, with Detector Model GK-6B, universal

Model GK-6C, for tying unleased warps only



EDDA INTERNATIONAL CORP.

468 FOURTH AVE., NEW YORK 16, N. Y. CALHOUN TOWERS, GREENVILLE, S. C.



Eastern Division: 546 South Avenue, Garwood, New Jersey



### ARNEL

Fabrics...finished

by Kenyon

For Arnel® finishing that meets the exacting specifications of the Celanese Corporation of America, look to Kenyon. Kenyon know-how and the Kenyon program of rigid quality control are your assurance of the highest standards of excellence.

"There is no Substitute for <u>Kenyon</u> Finishing!"



### **NEW FABRICS**

### **NEW YARNS**

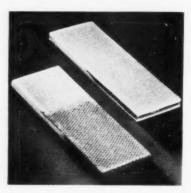
### **New Celanese Fabrics**

Celanese Corp. of America is announcing a brochure, The Fabric Story, which gives actual samples of the fabrics woven of their fibers offered for fall wear. The six categories included in the booklet and illustrated by samples are: brown tweeds of acetate-rayon blends and 100% acetate, and bulky tweeds in mixed red of blended acetate, rayon and cotton.

For copies write Kay Daniels, Celanese Corp., 180 Madison Ave., New York 16, N. Y.

### **Dynel Protects Laminates**

Improved resistance of low pressure glass-reinforced laminates to chemicals and abrasion by using a surface veil or overlay of Dynel fabric was announced recently by Carbide and Carbon Chemicals Co., a division of Union Carbide and Carbon Corp.



The use of Dynel overlays, on both or either sides of the laminates is inexpensive and simple, according to A. L. Snyder, sales manager of Dynel. These overlays can be used with polyesters, phenolic or epoxy resins laminates.

Dynel overlays can be used for the protection of low pressure glass reinforced laminates throughout the chemical field and for such products as boat hulls, aircraft assemblies, automobile bodies, structural panels, machine tool parts, all types of trays and many other products exposed to weather damage, abrasion, salt water, chemicals and corrosive fumes, Mr. Snyder said.

In these uses, Dynel overlays are not intended to replace glass but to protect glass-reinforced laminates in many areas where conditions are not conducive to glass alone.

### Warp Knit Grading Standards

Members of the Warp Knit Fabric Manufacturers Group of The National Federation of Textiles, Inc., have been testing standards for grading finished warp knit fabrics in their mills.

If the tests determine they will meet present day market requirements, the Group's Research and Standards Committee will recommend the approval of the new standards by the Group. The standards, recently revised, specify that a warp knit fabric shall be graded first quality provided it has no more than 100 penalty points per 250 square yards.

### THE TEXTILE



DISTRIBUTORS INSTITUTE, INC.

### NEWS AND COMMENT

### more golf tournament pictures

Textile people who were lucky enough to attend TDI's annual golf tournament last June at Shawnee Inn, Shawnee-on-Delaware, Pa., are still talking about the wonderful time they had. Here are a few more souvenir snapshots of the pleasant proceedings.



GOLF WITHOUT SORE FEET—These golfers believe in getting around the Eisenhower way.



COMEDIANS—TDI officials George Greenspan (left) and Walter Ross delight the audience with a duet.

WAITING FOR THAT WONDERFUL STEAK DINNER—Hilda A. Wiedenfeld, TDI Executive Secretary, and friends between courses in the dining room of the Shawnee Inn.



A LONG DRIVE—Three members of a foursome watch the ball of the fourth sail down the fairway.



CHOW LINE—After a morning of golf, those buffet lunches were delicious.



WORK WAS NEVER LIKE THIS-An after-luncheon chat.





### 19th Southern Textile Exposition

Greenville, S. C.

October 1-5

GREENVILLE, S. C.—Measured in terms of variety of exhibits and volume of attendance, this year's Southern Textile Exposition promises to be bigger and better than ever before.

The 19th biennial exposition will open Monday, Oct. 1, and close on Friday, Oct. 5. Each day from 9 a.m. to 6 p.m. mammoth downtown Textile Hall and its six annexes will become not only a labyrinthine textile scenic wonderland but also a giant pilot plant, since many of the exhibits will be "live" and operated under mill-simulated conditions.

Domestic and foreign exhibitors contracting for space has long since exceeded the 300 mark, reports Miss Bertha M. Green, secretary of Textile Hall Corp., which sponsors the week-long window-shopping tour for thousands of mill men whose companies collectively represent a sales potential running into billions.

Textile Hall was built back in 1916-17 especially to house a machinery, equipment and supply show to serve a textile industry currently made up of over 8,000 units or plants. It has grown so fast in recent years, however, that since the 1950 show the exhibit space has been about doubled.

Erection of a 7,500 square foot addition to the newest of the Textile Hall annexes brings the total space for the 1956 show to 95,000 square feet. Powerdriven or forced ventilation has been installed in all buildings to meet the contingency of unseasonably warm weather, such as prevailed in 1954.

The list of exhibitors indicates a wider variety of heavy basic machinery and equipment will be shown this year than usual and that virtually every major U. S. textile machinery manufacturer has booked space, including several who did not participate in 1954. There are also a few Japanese and European firms represented for the first time.

Emphasis is expected to be not only on basic highspeed processing machinery, but on materials handling, cleaning equipment, and on electronic developments that are bringing a growing application of this type of motion control to machinery and processes.

### **Exhibitors and Exhibits**

For Floor Plan of Exposition see Page 88

ABBOTT MACHINE CO., INC.,
WILTON, N. H. — (824 IN ANNEX #4)
EXHIST: 100-Spindle Automatic 6\* Traverse
Cheese Winder, 50- and 40-Spindle Automatic Quiller, and 12-Spindle Automatic Radial Quiller.
IN ATTENDANCE: L. S. Ligon, E. W. Skinner,
F. L. Hendricks, S. A. Roane, and L. S.
Ligon, Jr.

ABINGTON TEXTILE MACHINERY WORKS,

BINGTON TEXTILE MACHINERY WORKS, GREENVILLE, S. C. — (108 A)
EXHIBIT: Their latest Vacuum Stripper, including "Rolaslivup" (doffer rolls with automatic piece-up) installed and in operation on a Whitin card. Also their Hand Knotters, Beam for beam dyeing, and Package Carrier for package dyeing. IN ATTENDANCE: J. W. Burbine, W. W. Brame, Summer Smith, Jr., Ernest Clark, M. R. Bradley, Oliver Ramo, Francis Richardson, Sumner Smith.

ACME STEEL CO.,

CHICAGO, ILL. — (516) Exhibit: Steel Strapping, Tools and Equip-

ment.

8 ATTENDANCE: W. S. Huss, G. R. Easley,
R. C. Camp, D. C. Jorgensen, M. M.
Brown, J. B. Farr, E. H. Jones, J. J. Jorgensen, J. N. McLean, E. S. Lumpkin, J.
B. Quarles, J. H. Scott, S. F. Woodley,
R. M. Snodell.

DAMS, INC., GREENVILLE, S. C. — (829) EXHBET: Their "Adamstop" stop motion for roving frames. IN ATENDANCE: S. J. Adams, J. B. Adams,

Cecil Adams

AGA DIV. ELASTIC STOP NUT CORP OF AMER., ELIZABETH, N. J. — (601) (See—W. D. Dodenhoff Co.)

AKRON SPOOL MFG. CO.,
AKRON, OHIO — (465-469)
EXHIBIT: Spools and Bobbins.
In ATTENDANCE: John B. Hawley, Harvey

ALDRICH MACHINE WORKS GREENWOOD, S. C. — (26

ALEMITE DIVISION, CHICAGO, ILL. — (405) EXHBIT: Their Accumatic Systems of Cen-tralized Lubrication and their Oil-Mist

James Miniea. M. N. Smith, Pat Blahut,

ALLEN BEAM CO., NEW BEDFORD, MASS. — (101)

ALLEN-BRADLEY CO.,
MILWAUKEE, WIS. — (414-415)
EXRIBIT: Motor starters for both manual
and magnetic operation, motor control
accessories and pilot devices.
IN ATTENDANCE: H. Rosenkranz, L. P.
Spoon, Jr., W. Huette.

ALLENTOWN BOBBIN WORKS, ALLENTOWN, PA. — (316 IN BALCONY) EXHIBIT: Bobbins and Spools for the throw-ing of fine denier yarns. In ATTEMDANCE: H. W. Mack.

ALLIED CHEMICAL & DYE CORP.,

NEW YORK, N. Y.—(364)
EXHIBIT: Caprolan deep-dye nylon, Caprolan tensile-tough nylon; new yarn putups; heavy yarns; fabrics and end-items of Caprolan.

IN ATTENDANCE: G. H. Hotte, S. A. Copper, R. E. Ellsworth.

ALLIED PRODUCERS & SUPPLY CO., INC., ATHENS, GA. — (327-328) EXEMPT: Cloth Spotters in kier and acid type, as well as Tar Removers; custom-built Primes and Finishes for floors of all types

types.
(ATTENDANCE: H. E. Breedlove, J. A. Rachels, Jr., M. E. Tucker, R. E. Binet, M.
W. Ramsey, E. C. Walters.

### Yes, we said "Fine Counts"



Some mills, which were successfully using Ideal Feathertouch Drafting on carded stock, hesitated to use it for fine counts and for combed yarn because of former prejudice against using metallic rolls on fine counts. Those who conducted tests have uniformly made reports like the one above. Today many of the largest and finest mills are running all of their finest counts on Ideal Feathertouch Drafting.

Ideal's patented ball bearing spacing sections keep the rolls perfectly aligned at all times. Free-floating fluted top rolls give only a light feathertouch to the stock. They automatically even out thick and thin places in the sliver and impart a permanent crimp. Ideal High Speed Ball Bearing Drawing\* cannot bruise, crush, or cut fibres. Even on the finest counts, Ideal Feathertouch Drafting gives you the highest quality drawing sliver. And Ideal Feathertouch Drafting costs less to buy, less to run, and less to maintain. Write for full information today.

\*Patent Nos. 2,610,363; 2,490,544; 2,412,357. Other patents pending. **Ideal** Industries, Inc.
Bessemer City, N. C.

ALLIS-CHALMERS MFG. CO.,
MILWAUKEE, WIS. — (416-418)
EXHBIRT: Various textile Motors and textile
Controls.
IN ATTENBANCE: R. H. Cline, A. I. Richardson, W. E. Scott.

ALLIS-CHALMERS MFG. CO., HARVEY, ILL. — (601) (See—W. D. Dodenhoff Co.)

ALLIS, LOUIS CO.,
MILWAUKEE, WIS. — (807)
EXHBIT: Textile Motors and Adjustable
Speed Drives, featuring their new totally
enclosed fan-cooled textile motor.
IN ATTENDANCE: Maurie Weitekamp, Al Barron, James Smith, Robert Overstreet, Bud
Becker.

ALVEY CONVEYOR MFG. CO., ST. LOUIS, MO. — (514)

AMERICAN AIR FILTER CO., INC., LOUISVILLE, KY. — (463-464)

AMERICAN BALMES CO., NEWARK, N. J. — (601) (See — W. D. Dodenhoff Co.)

AMERICAN CRAYON CO., SANDUSKY, ONIO — (332-333) EXHIBIT: Marking and coloring materials for the textile trade. In ATTENDANCE: J. E. Hester, W. T. Schlei-

AMERICAN FLOOR PRODUCTS CO., WASHINGTON, D. C. — (102 A)

AMERICAN LAVA CORPORATION,
CHATTANOOGA, TENN. — (453-454)
(with Minnesota Mining and Manufacturing
Co.)
EXHIBIT: AlSiMag Thread Guides for the
manufacture, handling and processing of
all types of fibers; also display of special
"Lamicoid" textile products.
IN ATTENDANCE: J. B. Shacklett, J. E. Spearman, J. S. Gosnell, J. W. Crisp, W. J.

AMERICAN MOISTENING CO., PROVIDENCE, R. I. — (812 A) (See — Grinnell Company, Inc.)

AMERICAN MONORAIL CO., CLEVELAND, OHIO — (111-112) EXHIBIT: Automatic Cleaning Equipment for frames, underframes and ceilings: crane type Cleaners for looms; Overhead Han-dling Equipment; and Landahl Chainless

dling Equipment; and Lordon Conveyors.

ATTENDANCE: C. L. Fell, E. F. Kulp, L. R. McEachern, H. A. Rehfeld, Henry McKinney, C. P. Newell, E. H. Doerger, J. W. Cook, J. R. Whitted, E. J. Whitted.

AMERICAN PULLEY CO., PHILADELPHIA, PA. — (251)

AMERICAN SAFETY TABLE CO., READING, PA. — (234) (See — Hollister-Moreland Co.)

AMERICA'S TEXTILE REPORTER, GREENVILLE, S. C. — (226-227)

ANHEUSER-BUSCH, INC., CHARLOTTE, N. C. — (512) EXHIBIT: Corn Starches for textile applica-

ATTENDANCE: Dr. Barry Scallett, Ken Battenfield, W. P. Hope.

ARMSTRONG CORK CO., LANCASTER, PA. — (144)
EXHIBIT: New anti-static Cots; high-draft Aprons; loom supplies, such as roll covering, pickers, loom binder covering; and miscellaneous mill supplies.
IN ATTENDANCE: J. V. Ashley, T. L. Hill, W. T. Coker, H. H. Jordan, J. T. Vernon, T. P. Rosser, T. H. Weaver, C. A. Bates, W. A. Simmons, C. H. Cooper.

ARMSTRONG MACHINE WORKS, THREE RIVERS, MICH. — (457-458)

ASHWORTH BROS. INC, GREENVILLE, S. C. — (5) EXHBIT: Card Clothing for all types of cards and napping machinery; brush and card clothing for special purposes; Lick-erin and Garnet Wires; Platt's metallic wire

wire.
IN ATTENDANCE: R. C. Ashworth, Jr., W. J.
Flynn, Jr., F. L. Armitage, W. Halstead,
Thurman Hart, A. E. Johnston, Sr., J.
M. Reed, Ray Clary, A. E. Johnston, Jr.,
J. E. Seacord, Henry Ashworth, C. C.
Withington, Jr.

ATLANTA BRUSH CO.,
ATLANTA GA. — (451-452 IN ANNEX #1)
EXMUNT: Complete line of textile and industrial Brushes.
IN ATTENDANCE; Wim. C. Perkins, G. B.
Snow, A. W. Dillard, Ansel McNeill.

ATLANTA PAPER CO., ATLANTA, GA. — (219)

ATLANTIC GELATIN, WOBURN, MASS. — (501) (See — Ira L. Griffin)

BACHMANN UXBRIDGE WORSTED CO., UXBRIDGE, MASS. — (501) (See — Ira L. Griffin)

BAHAN TEXTILE MACHINERY CO., GREENVILLE, S. C. — (140)

BAHNSON CO.,
WINSTON-SALEM, N. C. — (832-833)
EXHBUT: Principal theme "Packaged Modernization", showing Air Conditioning, Vacuum Collection, Spinning Frame Creels, and Travelling Cleaners.
IN ATTENDANCE: A. H. Bahnson, Jr., Frederick Boxall, F. L. Phillips, J. M. Cranford, M. O. Bradshaw, R. B. Crosland, E. G. Byrum, Jr., A. E. Thomas, Frank Walters, Ira L. Brown, Joe Browning.

BANCROFT BELTING CO., BOSTON, MASS. — (229 A) (See — Wilson F. Hurley)

BARBER-COLMAN CO., ROCKFORD, ILL. — (254-255, 259-261) EXHIBIT: M Model Warp Tying Machine, 66 FSH Drawing-in Machine, and DW Su-per-Speed Warper. IN ATTENDANCE: F. D. Taylor.

BARKER INSTRUMENT & MACHINE CO., GREENVILLE, S. C. — (110 B) EXHIBIT: Time Clocks, Job Recorders, Count-ing Devices, Cylinders and Valves, Tim-ers, and Repeat Cycle Counters. IN ATTENDANCE: H. V. Barker, J. V. Barker, Norman Rivkees, Frank Mullins, Henry Allen

Allen

BARRELED SUNLIGHT PAINT CO.,
PROVIDENCE, R. I. — (223 A)
EXHIBIT: Their heavy duty Paints for textile plant maintenance; also their "Engineered Colors" for better seeing and working conditions.

IN ATTENDANCE: F. K. McCarthy, H. A. Solie, C. L. Duffie, T. C. Roggenkamp, P. R. Singletary.

BASSICK CO., BRIDGEPORT, CONN. -- (410)

BATSON, LOUIS P. CO., GREENVILLE, S. C. — (221) EXHIBIT: Vibration Mountings, Harness Strapping, Dobby Cords, Leader Wires, a new positive adjustment Jack Stick and Strap Assembly, and many other acces-

sories
IN ATTENDANCE: L. P. Batson, Jr., H. Batson, J. P. Baston, H. L. Cannon, J. A. Williams, Jr., L. C. Shook, W. R. Fox, D. S. Murphy, Ted Ruwitch, Z. S. Blanchard, Milton Hutchinson, Roy Noble.

BATSON MFG. CO., GREENVILLE, S. C. — (221) (See—Louis P. Batson Co.)

BEETLE BOAT CO., NEW BEDFORD, MASS. — (601) (See—W. D. Dodenhoff Co.)

BEST, EDWARD H. & CO., BOSTON, MASS. — (306 IN BALCONY) EXHIBIT: Samples of industrial fabrics used by the textile industry. In Attendance: J. W. Hill, W. C. Hames, B. C. Yates, Jr.

BINNEY & SMITH, INC., NEW YORK, N. Y. — (335) EXHIBIT: Full line of industrial Crayons and Chalks. IN ATTENDANCE: M. R. Vogel, W. G. King, O. J. Andersen.

BIRCH BROS., INC.,
SOMERVILLE, MASS. — (247-248)
EXHIBIT: New equipment to be featured:
Laboratory Padder, stainless steel
Scutcher, Tacking Head, Sewing Machine
for tufted carpets, new "Supreme" butt
seam grey room Sewing Machine, and
their Model 5 Cut-Off Winder. Other
equipment on display includes a Yarn
Assorting Balance, Fulling Mill Yardage
Counter, Curved Bar Pat. Expander Roll,
Adjustable Spiral Opening Roll, and va-



Birch Brothers 2-Roll Laboratory Padder

rious other types of their Sewing Ma-

Jr., J. C. Cosby, Richard Briggs.

BOOTH, BENJAMIN CO.,
PHILADELPHIA, PA. — (115)
EXHIBIT: Card Clothing, conventional and
Strip-O-Matic; Fabric Condenser Tape
Supr-O-Tape; and their textile Band for
spinning frames and twisters, Supr-OBand. An entirely new development for
card clothing will be shown.
IN ATTENDANCE: E. Allen Snape, Jr., Norman Bush, Charles Stover.

BOULIGNY CO., CHARLOTTE, N. C. — (823)
EXHIBIT: Completely modernized Spinning Frame, featuring their Tru-Draft System, large package change-over, and band to tape drive conversion.

IN ATTENDANCE: L. O. Crawford, John Collins, J. P. Coleman, John Conningham, Fred Bever, G. Schoeneck, Sam Walsh.

BOWEN-HUNTER BOBBIN CO., EAST CORINTH, VT. — (213) (See Greenville Textile Supply)

BRAINARD STEEL DIV., WARREN, OHIO — (825) (See Wrenn Bros.)

BROWNING MFG. CO.,
MAYSVILLE, KY. — (307-308)
EXMIBIT: Drives, Pulleys, Couplings.
IN ATTEMPORANCE: L. L. Browning, T. Frank
Jones, A. W. Wyatt, R. Burton, H. B.
Lyes.

BULLARD CLARK CO.,

DANIELSON, CONN. — (488 IN ANNEX ±1)

(E. H. Jacobs Northern Div. and E. H.
Jacobs Southern Div., Charlotte, N. C.)

EXHIBIT: Jacobs "Verybest" loom accessories, featuring canvas, leather, rubber, plastic, plyweld, hickory, rubberized fabric and interwoven fabric construction. Several new developments and products. IN ATIENDANCE: E. J. Bullard, W. R. Muller, C. W. Cain, S. B. Henderson, Doyle Stansell, L. L. Froneberger, Jr., R. M. Briggs, Jr., F. W. Beaver, Bill Heacock, Thomas Soucy, Jr., John Normington, A. M. Romero.

BURLINGTON INDUSTRIES, INC., GREENSBORO, N. C. — (465-469) (See—R. E. L. Holt, Jr.)

BYERS, A. M. CO., PITTSBURGH, PA. — (331) EXMINIT: Wrought Iron products and illus-trations of applications in the textile in-

Grauons of applications in the textile industry.

(ATTENDANCE: H. R. Rowland, J. A. Cain, H. E. McKenzie, J. M. Cox, F. D. Pryor, Jr.

CAROLINA BELTING CO., GREENVILLE, S. C. — (212)
Reception booth for convenience of visitors. In Attendance: C. F. Miller, C. T. Allen, Earle Davis, J. W. Slaughter, Dean N. Van Dyke,

CAROLINA SUPPLY CO.,
GREENVILLE, S. C. — (230)
Reception booth only.
IN ATTENDANCE: H. W. Harrison, Claiborne
Mardre, B. E. Elletson, J. O. Crawford,
Jr., B. F. Verdin, Frank Casey, Homer
Stavenson

ARTER, A. B. INC.,
GASTONIA, N. C. — (108)
EXHIBIT: Boyce Weavers Knotters, Cartabon, and Spinning and Twister Travelers,
IN ATTENDANCE: R. A. Haynes, W. L. Rankin, J. R. Richie, P. L. Piercy, D. E. Phillips, J. K. Davis, J. B. Carter, E. Haines Gregg.



Many strange fibers are "meeting on the frames" today, as new developments continually increase the number and variety of synthetics and blends.

Controlling these new fibers and filaments in spinning or twisting can be tricky business. And you seldom have much time to experiment. Let Victor experience take the place of costly trial-and-error.

Victor "keeps a step ahead" by working with the producers during development of new synthetics. That's why, when they reach you for production, Victor is prepared to help you overcome any new processing problems they present.

When you need help to get top-quality and trouble-free production—with synthetics, blends, or natural fibers—call in a Victor

Service Engineer. Write, wire, or phone the nearest Victor office for prompt service.

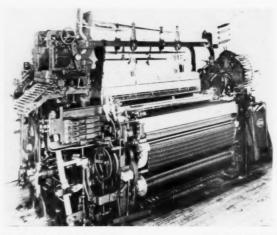
### VICTOR RING TRAVELER COMPANY

PROVIDENCE, R. I. . . 20 Mathewson Street . . . . . . Tel. DExter 1-0737

GASTONIA, N. C. . . 914-916 East Franklin Ave. . . Tel. UNiversity 5-0891

Visit the VICTOR BOOTH 218 at the GREENVILLE TEXTILE EXPOSITION Oct. 1-5





Crompton & Knowles Model M-P Automatic Bobbin Changing Dobby Cotton Dress Goods Loom

CEN-TENNIAL COTTON GIN CO., COLUMBUS, GA. — (821)

CHAINVEYOR CO., LOS ANGELES, CALIF. — (See—W. D. Dodenhoff)

CHAPMAN NEUTRALIZER CO PORTLAND, MAINE — (221) (See—Batson Mfg. Co.)

CHARLOTTE MFG. CO.,
CHARLOTTE, N. C. — (143)
EXHBIT: Fillet Machine in operation, showing how card clothing is made; types of their cotton, wool, asbestos and special card clothing.
IN ATTENDANCE: A. D. Ennis, A. J. Turner,
R. P. Bullard, R. G. Spratt, Jr., Harmon
Geiger, Sam Bernardo, Marion Rogers,
C. A. Spratt.

CLARK-CUTLER-McDERMOTT CO., FRANKLIN, MASS. — (ANNEX #6) EXHIBIT: Air-Loc mounting pads. In Attendance: Roland McDermott, Robert Schmitt, J. Murray Stevens, Joseph Mc-Williams, Thomas McDermott.

CLARK DOOR CO., INC., NEWARK, N. J. — (342)
EXHIBIT: Bifold Model Prest-O-Matic Door Unit and other new developments in doors for mills.
IN ATTENDANCE: H. B. Clark, H. B. Clark, Jr., J. H. Harris, Jr.

CLARK EQUIPMENT CO.,
BATTLE CREEK, MICHIGAN — (812)
EXHBRI: Operating display, featuring their
new line of gas-powered lift trucks, the
"Clarklifts".
IN ATTENDANCE B. E. Phillips, John Shand,
J. W. Kelly, P. P. Lukas, G. E. Boyce,
E. V. Wiley, H. R. Hansen.

CLINTON CORN PROCESSING CO., CLINTON, IOWA — (206)

COATS & CLARK'S SALES CORP.,

NEWARK, N. J. — (220)
EXHBIT: Nylon Travelers, also Sewing
Threads, Crochet Cottons and Knitting
Yarns, Embroidery Threads, Wool and IN ATTENDANCE: R. H. Wilcox, T. B. Farmer.

COCKER MACHINERY & FOUNDRY CO.,
GASTONIA, N. C. — (830-831)
EXHIBIT: Their new Cotton Slasher with
newest type size box known as the "Sizemaster" also Cotton Warper for section
beams up to 40°, new type Dye Beam
Warper for pressure dyeing, Creels and
Size Cooking Kettle.
IN ATTERDANCE: John Cocker III, J. C.
Bodansky, Frank Suggs, Duck Groce,
Hoyt Cunningham, Don Shepherd, Jim
Etheredge.

COLE ENGINEERING CORP.,

COLUMBUS, GA. — (27).
EXHIBIT: Top Rolls, Long Draft Conversion
Units, Saddles and Weighting Units.
IN ATTENDANCE: C. E. Hett, Jr., Wilton
Todd.

COLEMAN CO., INC.,
GREENVILLE, S. C. — (822-823)
EXHIBIT: In addition to modernized Spinning
Frame isee Bouligny), they will show
Yale & Towne Fork Trucks and other
material handling equipment.
IN ATTENDANCE: J. P. Coleman, E. A. Brigham, C. Campbell, Harris Ford, L. O.
Crawford, John Collins, John Cunningham, Fred Beuer.

COLLINS BROTHERS MACHINE CO., PAWTUCKET, R. I. — (817) (See—Karl H. Inderfurth Co.

COLSON CORPORATION, ELYRIA, OHIO — (825) (See—Wrenn Bros.)

CONTAINER CORP. OF AMERICA, GREENSBORO, N. C. — (129) EXHIBIT: Cartons and Containers. IN ATTENDANCE: T. L. Benson, R. H. Dale, C. C. Self, Maisie Wylle.

CONTINENTAL DIAMOND FIBRE CO., SPARTANBURG, S. C. — (106)
EXHIBIT: Diamond vulcanized fibre textile receptacles; Dilecto conditioning Trucks; Celoron silent Gears; Fibre and Celoron Loom Parts; and Dilecto laminated Plastics for the textile industry.

IN ATTENDANCE: F. M. Grauer, H. M. Dexter, A. H. Briggs, F. L. Cooper, Olan Thomas, C. L. Simmons, Jr., A. D. Gray, G. W. Vonseth, G. B. Haynes, H. F. Black.

CORN PRODUCTS SALES CO.
GREENVILLE, S. C. — (456)
Reception booth only.
IN ATTENDANCE: A. N. McFarlane, A. A.
Harden, D. E. Linn, J. T. Seawell, J. M.
Coe, L. H. Kelley, Herman Baker, J. M.
Hill, Harmon Harris, W. R. Joyner, H. L.
Bailey, Earl G. King, Gordon E. Wood,
J. M. Adcock, J. N. Hall, J. Alden Simp-

COURTAULDS (ALABAMA) INC., NEW YORK, N. Y. — (356-357) EXHBIT: Fabrics and other items made EXHIBIT: Fabrics and other items made from Coloray. In ATTENDANCE: Royston Dunford, G. V. Lund, William H. Ward, J. A. Plant.

COURTNEY, DANA S. CO., CHICOPEE, MASS. — (130) (See—Watson & Desmond)



Dodenhoff Fiber Meter Automatic Blending System with Automatic Mixing Chamber

CROMPTON & KNOWLES LOOM WORKS,
CHARLOTTE, N. C. — (141)
EXHIBIT: Their M-P Automatic Bobbin
Changing Dobby Cotton Dress Goods
Loom: latest M-P design Automatic Bobbin Changing Dobby Convertible Loom;
also their new 36-Bobbin Rotary Magazine with the vacuum control feature.
IN ATTENDANCE: F. W. HOWE, Jr., H. R.
Wing, A. Palmer, J. F. Molloy, J. C.
Irving, R. A. Sharpe, L. Burgess, H. C.
Wingard.

CROSS SALES AND ENGINEERING CO., GREENSBORO, N. C. — (334) EXHIBIT: Mechanical Power Transmission equipment, also fluid Couplings, mechan-ical variable speed Drives, and flexible Couplings. ical variable speed Drives, and flexible Couplings.
In ATTENDANCE: W. S. Cross, J. H. Chambers, O. D. Tice.

CURTIS & MARBLE MACHINE CO., WORCESTER, MASS. — (245-246)
EXHIBIT: COtton Range for cloth finishing consisting of vertical brusher, cloth guiding platform, shear and pneumatic-operated rolling head, the latter two also suitable for synthetic fabrics. Railway Sewing Machine for all types of goods. In Attendance: W. E. Hildick, W. F. Woodward, L. F. Remington, Jack Federline, Thure Byland.

CUTLER-HAMMER, INC.,
MILWAUKEE, WIS.— (429)
EXHIBIT: Loom Switches, Card Controllers,
Shipper Rod Switch, Combination Startiers, Pushbutton Stations, and Safety ers, Pust Switches.

SWITCHES.

RATTENDANCE: M. R. Brice, B. R. Stratton,
W. L. Hampton, F. L. Sheram, F. A. Mil-ler, C. D. Capelle, R. H. Hanson.

DAILY NEWS RECORD, NEW YORK, N. Y. — (210)

DARNELL CORP., LTD., LONG BEACH, CALIF. — (213) (See—Greenville Textile Supply)

DAVIS & FURBER MACHINE CO., CHARLOTTE, N. C. — (209 B) EXHIBIT: Card Clothing, Tapes, Aprons, and Spindles ATTENDANCE: E. N. Atwood, H. A. Newby, W. M. Truslow, J. W. Wagoner.

DAYTON RUBBER CO., DAYTON, OHIO — (139)

DIEHL MFG. CO., SOMERVILLE, N. J. — (834)
EXHIBIT: Textile Motors, including new NEMA Frame types; also special purpose loom and lint-free Drives. New feature their Type BA Loom Power Transmitter and a new self-cleaning textile Motor. In ATTENDANCE: A. R. Booth, R. D. Ingalls, A. J. Murphy, J. W. Wilson, R. J. Peterson and E. F. Graham.

DIXIE BEARINGS, INC., GREENVILLE, S. C. — (434-435) EXHIBIT: Bearings for the textile industry, SKF Tension Pulleys, Bronze Bushings and Bar Stock, Owatonna bearing re-

and Bar Stock, Owatonna bearing re-moval tools.

ATTENDANCE: E. F. Brown, H. L. Cox, Larry Lammers, Julian Phelps, H. L. Graham, Jimmy Lindsey, D. Rhodes, J. L. Disney

DIXIE LEATHER CORP ALBANY, GA. — (507)
(See—Graton & Knight)

BRISTOL, R. I. — (465 (See—R. E. L. Holt)

DOBECKMUN CO.,

CLEYELAND, OHIO — (202-203)

EXHIBIT: LUREX, LUREX-MM, and LUREX-MF
yarns in complete metallic color range,
also fabrics containing Lurex, and quiller
at work, quilling Lurex yarns.

IN ATTENDANCE: Arthur Gould, James
Griggs, David De Roode, Richard Hershberger, George Todd, Leon Seidel, Philip
Nathanson

Nathanson.

DODENHOFF, W. D. CO.,
GREENVILLE, S. C. — (109)
EXHIBIT: Blending Machinery—Fiber Meter
Automatic Weighing Feeder, and Automatic Drum Mixing Chamber. Beetle
Boat Co.; Fiber glass Trucks and Boxes;
AGA Div. Elastic Stop Nut Corp: Agastat Pneumatic Timing Controls: American Balmes Corp.: Vacumax Cleaner, Card
Stripper, and Thread Illuminator: AllisChalmers Mfg. Co.: Fork Lift Trucks;
Chainveyor Corp.: Overhead Conveyors;
Mathews Conveyor Co.: Conveyors; Ernst
Jacoby: Fiber Suction System for Spinning Frames.

### To Find the Shuttle Improvements most important to YOUR weaving...



M.P., Walan and Wahide Shuttles in Booth 130



WALAN



M. P. — Specially designed Watson-Williams Shuttle to be used with Crompton & Knowles new Multi-Purpose Loom. Fibre side and bottom, custom-made to your particular specifications, with every one of Watson-Williams features.

WALAN — Tougher than an elephant's hide — an outer laminated and impregnated material that wears to an increasingly smoother surface. And it stays smooth without splintering, after repeated batterings. Over a dogwood center, Walan permits a shuttle of any shape, with any eye you desire, so that for the first time you get molded and custom features in the same shuttle.

WAHIDE - A first cousin in toughness to Walan, Wahide serves best as an alternate to fibre covering one, two, three or four sides of a dogwood shuttle.



NORTHERN REPRESENTATIVES:

Guy C. Burbank 32 Beaconsfield Road, Worcester, Mass.

Howard S. Pellatt 4 Branch Ave., Saylesville, R. I.

Sutton M. Ebert P. O. Box 7144, Elkins Park, Philadelphia, Pa. SOUTHERN REPRESENTATIVES:

P. O. Box 701, Greensboro, N. C.

Watson & Desmond Box 1954, Charlotte, N. C.

Ray A. Norman P. O. Drawer 779, Greenville, S. C.

watson-williams mfg. co. MILLBURY, MASS. ATTENDANCE: W. F. Leineweber, A. V. Moody, Carl Baker, J. C. Whitehurst, H. P. Worth, W. W. Jordan.

DODGE MFG. CORP.,

MISHAWAKA, IND. — (106 A)

EXHBIF: Their new Flexidyne Card Drive,
also their Variable Speed Drive for Spinning Frames, Taper-Lock Sheaves, and
other drive elements.
IN ATTENDANCE: George Wooley, Paul Keb,
Reynolds Barker.

Reynolds Barker.

DRAPER CORP.,

MOPEDALE, MASS. — (134-136)
EXHIBIT: Two 50" X-2 Model Looms weaving synthetic yarns, one of the looms equipped with a new Automatic Filling Magazine and a pneumatic Thread Clearing Device. A 82" XP-2 Model high speed wide Sheeting Loom. In addition a comprehensive display of Bobbins, Rings, Spindles, and their Shuttles, featuring the new Tru-Moid plastic shuttle.

IN ATTENDANCE: T. H. West, W. K. Child, F. M. Fitzgerald, J. B. Jackson, W. E. Soderberg, J. H. Grant, Edward Cranshaw, Richard Childs, A. A. Laferte, and J. M. Budzyna—all Northern Repr.

SOUTHERN REPR.: W. M. Mitchell, A. W. Kilgore, J. D. Marshall, J. C. Huff, Jr., W. M. Brice, Jr., C. H. Draper, Jr., Q. S. Halliday, B. Z. Ruff, T. W. Taylor, W. W. Baldwin, E. T. Austin, J. M. Tuten, W. E. Turner, F. B. Elsmore, F. A. Ridenour, M. E. Hurst, Nathan Bettis, S. A. Merchant, J. R. Smart, G. C. McGuire, P. A. Wilson, C. H. Lapworth.

DRESCO CO., EAST WEYMOUTH, MASS. — (340-341) (See—Oliver D. Landis, Inc.)

DUCHE, T. M. & SONS, INC., NEW YORK, N. Y. — (501) (See—Ira L. Griffin & Sons)

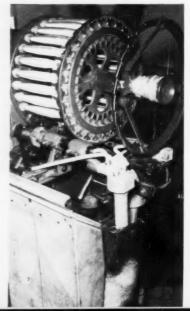
DU PONT, E. I. de NEMOURS & CO. INC., ATLANTA, GA. — (806) EXHIBIT: Paints applicable to the textile industry. IN ATTENDANCE: H. L. Norton, B. G. War-wick, W. K. Sandefur, G. M. Drake, V. D. Caldwell.

DURANT MANUFACTURING CO., MILWAUKEE, WIS. — (110 B)

EDDA INTERNATIONAL CORP., NEW YORK, N. Y. — (503) EXHIBIT: Titan Warp Tying-in Machine, Titan Selector, and Excelsior Reed Clean-ing and Polishing Machine. IN ATTENDANCE: B. Gudjonsson, H. A. Na-gel, H. H. Thacker.

ENGINEERED PLASTICS, INC.,
GIBSONVILLE, N. C. — (270)
EXHIBIT: Bobbins, Spools, Tubes, Caps, Cam
Followers, Anti-Static Rods, Tubes and
Rollers, collapsible Take-up Arbors and
Sizing Cylinders, and miscellaneous textile specialties. tile specialties.
In Attendance: D. M. Davidson.

ENGINEERING SALES CO., CHARLOTTE, N. C. — (508 B) (See—Nutting Truck & Caster)



ERNST JACOBI, AUGSBURG, GERMANY — (601) (See—W. D. Dodenhoff)

EXACT WEIGHT SCALE CO

XACT WEIGHT SCALE CO., COLUMBUS, OHIO — (209 A) EXHIBIT: Various types of Scales for the textile industry, including their new Yarn Count Scale. IN ATTENDANCE: E. A. LeVay, Jose Orta, J. E. Perkins, B. L. Price, T. L. Brewer,

E. Perkins, l. J. E. Konkle.

EXCEL TEXTILE SUPPLY CO., LINCOLNTON, N. C. — (23). EXHIBIT: All types of Materials Handling Equipment, such as Boxes and Trucks. In Attendance: N. W. Eurey, Paul Eurey, C. W. Eurey.

FAIRBANKS, MORSE & CO.,
ATLANTA, GA. — (102)
EXHBIT: Axial Air Gap Motors for looms
and card drives, also display of Scales as
used in the textile industry.
IN ATTENDANCE: W. B. Wylly, J. R. Frost,
W. R. McGarrity, W. T. Jahn, C. H. Nash,
H. W. Lockwood.

FAULTLESS CASTER CORP., EVANSVILLE, IND. — (366) EXHBIT: Grease Sealed Casters. In Attendance: R. A. Madson, J. W. Allen,

FENWAL INC., ASHLAND, MASS. — (360) EXHIBIT: Temperature Control and Indicat-ing Devices. In Attendance: W. K. Hile, John Lancaster.

FINNELL SYSTEM, INC.,

ELKHART, IND. — (110)

EXHIBIT: Pollshing-Scrubbing Machines and other Cleaning Equipment, Cleansers,
Sealers and Waxes for floor care.

IN ATTENDANCE: J. E. Bates, H. H. Dickson,
John Savard, John Core, Lawrence
Arnold, V. L. Gustason.

FISHER MFG., CO.,
HARTWELL, GA. — (314-315)
EXHIBIT: Roving handling equipment, to be used with floating bottoms; Throughs for Barber-Colman spooler; and Trucks.
IN ATTENDANCE: J. G. Fisher, J. N. Fisher, R. M. Matthews.

FOSTER MACHINE CO., WESTFIELD, MASS. — (235-236) EXHIBIT: Their new super speed Foster-Muschamp Model 66 Automatic Filling Winder with both pinboarding attachment Winder with both pinboarding attachment and newly developed filling box stacker operating on both spun and filament yarns at the same time. The machine will also be equipped with a traveling lint cleaner system.

IN ATTENDANCE: W. C. Chisholm, E. C. Connor, H. W. Ball, P. H. Farmer, S. A. Burke, E. P. Dodge, G. W. Mallory, E. H. Ely

FOXBORO CO.,
FOXBORO, MASS. — (440)
EXHIBIT: Standard, cabinet-mounted control system for pressure dyeing machine; multi-record Dynalog Recorder; 12A
Temperature Transmitter; 13A d/p Cell
Transmitter; 14A Flyball Integrator. Also
measuring elements, such as Dewcel unit,
O-R potential Electrode (Redox), pH
Electrode ond Conductive Cell.
IN ATIENDANCE: Forest Leathers, Louis
Estes, Wade Rhyne, Thomas Jones, Samuel Alexander, W. W. Barron, Walter
Ridley.

FULLER BRUSH CO., HARTFORD, CONN. — (438) EXHBIT: Brushes for the textile industry. In Attendance: J. L. Harding, J. C. Henry, F. P. White, E. W. Mason.

GARLAND

ARLAND MFG, CO., SACO, ME. — (423)
EXHIBIT: Rawhide Loom Pickers, Picker Rod Lubrjcant, Picker Rod and Picker Stick Bunters, Check Straps, Rawhide Mallets and Hammers.
IN ATTENDANCE: F. L. O'Neil, Sr., F. L. O'Neil, Jr., Harry P. Garland, L. S. Garland, P. A. Garland.

GASTON COUNTY DYEING MACHINE COMPANY, STANLEY, N. C. — (811 IN ANNEX #4)
EXPRIST: Laboratory and small lot production textile Dyeing, Extracting and Drying equipment and Autoclaves for textile

processing. ATTENDANCE: G. H. Hacker, Gordon Hacker, R. P. Craig.

Draper Pneumatic Thread Clearer



Draper New Automatic Filling Magazine

GATES RUBBER CO.,
DENVER, COLO. — (419-420)
EXHIBIT: Variable speed Spinning Frame
Drive; Texhide Products, such as Pickers,
Lug Straps, Check Straps, Harness Straps,
and Take-up Roll Covering.
IN ATTENDANCE: R. O. Denslow, George
Heikes, J. L. Wescott, F. R. Carson, H. W.
Haynes, W. H. Hunter, D. J. Broadhurst,
E. B. Strong, T. C. Jannett.

GAULT, P. C. CO.,
GREENVILLE, S. C. — (354)
EXMIBIT: Intercommunication telephone system, also wireless paging system.
IN ATTENDANCE: P. C. Gault, J. C. Digh, J.
E. Marshall, J. A. Meyers.

GENERAL ELECTRIC CO., SCHENECTADY, NEW YORK — (117-119) EXHBHT: Apparatus Sales Division—Motors and Starters; Spectrophotometer; speed measuring devices and tension indicators; fuses and air circuit breakers.

Lamp Division, Cleveland, Ohio—New and improved types of industrial lighting, including the new Power-Groove Fluorescent Unit, the new Bonus line Fliament lamp, and a new line of PAR lamps.

IN ATTENDANCE: Apparatus Sales Div.—R. C. Mix, C. J. Ossenfort, Lamp Div.—L. J. Campbell, D. N. Jenks, G. E. Park, L. R. Anderson, A. C. Barr, R. B. Chipman, R. A. Lundgren, I. S. Meckly.

GEORGIA-CAROLINA OIL CO.,
MACON, GA. — (329-330)
EXMIBIT: Textile Lubricants and Oils.
IN ATTENDANCE: H. E. Coggin, B. N. Coggin,
G. W. Dobbins.

GILMAN PAINT & VARNISH CO., CHATTANOOGA, TENN. — (426-427) (with Oliney Paint Co., Spartanburg, S. C.) EXHIBIT: Gilpon Coatings and Gil-Chem Enamels In Attendance: R. B. Olney, W. P. Dobson, J. M. Isom, C. H. Dodson, of Olney; L. C. Teeters, R. C. Adams. of Gilman.

GINGHER, CLAIR H. & SON, GREENBORO, N. C. — (302) (Also Southern Representatives for Lydon Bros., Inc. and Jacob Walder Co.) EXHIBIT: Chrome Plated Scissors and other specialty items for the textile industry, In ATTENDANCE: W. A. Wallace, Jr., J. W. Davis, F. C. Feustel, C. H. Gingher.

GODO SHUTTLE CO., OSAKA, JAPAN — (362-363) (See Edward S. Rudnick)

GOSSETT MACHINE WORKS, INC., GASTONIA, N. C. — (233)

GOWER MFG. CO.,
GREENVILLE, S. C. — (506 IN ANNEX #2)
EXHIBIT: Automatic equipment unit for
stacking bobbins.
IN ATTENBANCE: R. H. Park, T. C. Gower,

GRATON & KNIGHT CO.,
WORCESTER, MASS. — (507)
EXHIDIT: Complete line of flat leather Belting for power transmission and textile leathers for looms and carding machinery. Feature: Picker Stick equipped with G&K-Dixie leathers in operation.

ATTENDANCE: J. G. Henrikson, W. S. Johnstone, W. F. McAnulty, J. L. Parker, E. Pickett, Jr.

E. Pickett, Jr.

GREENVILLE TEXTILE SUPPLY CO.,
GREENVILLE, S. C. — (213)

with Odell Mill Supply Co., Greensboro,
N. C.—The McLeod Companies:
Exhibit: Sample products of the following
manufacturers, represented by them:
Bowen Hunter Bobbin Co.; Darnell Corp.;
Hope Webbing Co.; W. T. Lane & Brothers, Inc.; Lestershire Spool Div.; Pioneer
Loom Reed Co.; and Sunray Co.
IN ATTENDANCE: H. Z. Graham, T. M.
Bailey, W. L. Brigham, E. W. Ware,
Marion Woods, C. Q. Mason, J. T. Mason
—all of Greenville; J. R. Foster, G. H.
Batchelor, C. L. Jones, Jr., D. C. Neese,
C. W. Fields, C. G. Price, Clyde Hathcock, G. H. Reynolds, B. C. Caldwell, C.
F. Roberts, T. C. Tyson—all of Odell; E.
A. Belville of Bowen; A. H. Seymour of
Darnell, R. C. Savage of Hope; J. M.
Baker of Lane; C. E. Lathrop, G. M.
Lang of Lestershire; M. W. Mayes of
Pioneer; H. O. Coddington, Charles Brown
of Sunray.

GRIFFIN, IRA L. & SONS,
CHARLOTTE, N. C. — (501)
EXHIBIT: Products of the following firms,
represented by them: Atlantic Gelatin;
samples by Atlantic Gelatin; Model A
Slasher Dryer by Bachmann Uxbridge;
Locust Bean Gum by Duche & Sons;
Starches by Hubinger Co.
IN ATTENDANCE: I. L. Griffin, I. L. Griffin,
Jr., G. E. Orr, W. A. Griffin, also representatives from Hubinger.

GRINNELL CO.
PROVIDENCE, R. I. — (821 A)
EXHIBIT: Products of American Moistening, their subsidiary, including a new Loom Cleaner, a small evaporative Cooling System, Humidity Controls, Humidityes, Atomizers, Valves, Psychrometers, and new self-cleaning Mine Spray.

IN ATTENDANCE: Marvin McCall, M. H. Irons, W. A. Mullins, S. B. Blanton, Joseph Walmsley, J. E. Townsend, J. H. Waldrip, J. D. Johnson, L. D. Terry, H. F. McKnight, W. W. Rhodes, Jr., Mitchell Fain, Dixon A. Lamb.

GULF OIL CORP.

PITTSBURGH, PA. — (211)
EXHIBIT: Their textile mill Lubricants, including Guifspin for spindles and Guiftex for needles
IN ATTENDANCE: J. H. Hooten, A. M. Wright, J. E. Cloeman, H. B. Minick, Jr., C. L. Thomas, Jr., R. G. Burkhalter, Sr., R. G. Burkhalter, Jr., J. J. Bacon, G. W. Burkhalter, J. E. Lanier, D. C. Austin, C. T. Timmons, S. E. Owen, Jr., C. J. Cason, L. A. Bethea, L. T. Daughtridge, Jr., S. W. Dance, W. T. Musgrove.

HARTFORD MACHINE SCREW CO., HARTFORD, CONN. — (602) EXHIBIT: Spinning frame in operation with their new Drafting System; their ball bearing Spindles, and Hartford Bobbin Hanger.

Hanger.

ATTENDANCE: A. R. Andrews, A. E. Winslow, W. B. Martin, A. M. Newell, N. D. Kennedy, L. K. Dodd, William Snowden.

HAYES INDUSTRIES, INC.,
JACKSON, MICH. — (ANNEX #6)
EXHIBIT: Aluminum Loom Beams, Section
Beams and Tricot Beams, featuring their
dynamically balanced giant size beam for
the cotton industry.
IN ATTENDANCE: W. H. Maxson, W. D.
Sharn

HEANY INDUSTRIAL CERAMIC CORP., NEW HAVEN, CONN. — (313) EXHIBIT: Ceramic Thread Guides and Ten-sion Devices. In Attendance: A. O. Pieper.

HERR MFG. CO. INC.,
BUFFALO, N. Y. — (268)
EXHBHT: Conical Rings and Flyers of all
constructions.
IN ATTENDANCE: H. B. Atwood, W. W.
Woodard.

IILE, W. K.
CHARLOTTE, N. C. — (360)
EXHBIT: Products of firms represented by
them, including—Electrical Temperature
Controls, etc. by Fenwal; Electric Heating Elements by Hotwatt; Electrically
heated Solder, Compound and Glue equipment by Sta-Warm.
IN ATTENDANCE: J. M. Lancaster, W. K.
Hile, H. S. Lee.

HILLYARD CHEMICAL CO., ST. JOSEPH, MISSOURI — (304-305) Ехният: Flooring treatment and building maintenance supplies. In ATTENDANCE: Wm. A. Schmaltz.

HOLLISTER-MORELAND CO., INC.,
SPARTANBURG, S. C. — (234)
EXHIBIT: Products of firms represented by
them, including—Sewing Machines by
Merrow Machine Co.; Tables by American
Safety Table Co.; Machines and allied accessories by Dinsmore.
IN ATTENDANCE: R. B. Moreland, O. S.
Bachelor, J. Bion Moreland, Warren G.
Martin, Jr., Lane C. Burris, Jack Washburn, Bob Pettit, Harry Duke.

Martin, Jr., Lane C. Burris, Jack Washburn, Bob Pettit, Harry Duke.

HOLT, R. E. L. JR. AND ASSOCIATES, INC.,
GREENBORO, N. C. — (465-469)
EXHIBIT: Products of the following firms
represented by them—Twister Spools and
Bobbins by Akron Spool & Mfg. Co.;
Burnylbond Tape by Burlington Narrow
Fabrics; Saddle Guides and Bobbin Holders by Dixon Corp.; Porcelain Guides and
Wire Guides by Mitchell-Bissell Co.;
Picker Sticks, Shuttles, etc. by Norris
Brothers: Dobby Cords, Canvas Lugs, etc.
by Rice Dobby Chain Co.; Shuttle Fur
and Sheepskin items by Snowiss Fur Co.;
Loom Bobbins and Warp Bobbins by
Stedco Southern, Inc.; Twister, Conveyor
and Card Belts, and Loom Strapping by
Ton-Tex.
IN ATTENDANCE: R. E. L. Holt, Jr., F. A.
New, D. R. Sellars, J. G. Skinner, Brad
Dunson, Cecil McAbee, J. B. Hawley, R.
R. Miller, William Potter, Jack Mitchell,
W. F. Fuetterer, David Norris, Ben
Snowiss, T. A. Lombardi, H. D. Fritchman.

HOPE WEBBING COMPANY PROVIDENCE, R. I. — (213) (See—Greenville Textile S Supply

HOTWATT, INC., DANVERS, MASS. — (360) (See—W. K. Hile)

HOWARD BROS. MFG. CO.
WORCESTER, MASS. — (252-253)
EXHBET: Card Clothing, Napper and Brush
Clothing, Hand Stripping and Hand Sampling Cards.

pling Cards.

f ATTENDANCE: H. C. Coley, N. A. Mitchell,
A. W. Englund, C. A. Haynes, E. V.
Callle, E. J. Lawrence, T. J. Jackson,
Harold Suggs.

HUBINGER CO.,
KEOKUK, 10WA — (501)
EXHIBIT: Various special textile Starches.
IN ATTENDANCE: G. R. Underwood, J. E.
Boyle, J. R. Myers, Carl Merritt, Max
Seitz, Lee Elizer.

HURLEY, WILSON F., GREENVILLE, S. C. — (229 A) EXHIBIT: Products of the following firms they represent—Bancroft Belting Co.; M. B. Products; M. H. Parks Co.; Warren Belting Co.

HYATT BEARINGS DIVISION,
HARRISON, N. J. — (104)
EXHIBIT: Bearings of all types and sizes.
IN ATTENDANCE: J. R. Gilmartin, E.
O'Neill, C. C. Wardell, G. B. Baxley,
H. Hutchinson, J. Lee, E. Maurushat.

HYSTER CO., DANVILLE, ILL. — (8 (See—Wrenn Bros.

IDEAL INDUSTRIES, INC.,
BESSEMER CITY, N. C. — (238-239)
EXHINIT: New 4-Delivery Ideal 18" Gauge
Drawing Frame: Ideal Ball Bearing Coiler
System; Flyer Conversions and Finishes
for Flyers; Card Room Spindles; all types
of other Spindles, new and repaired; Top
Arbor Rolls; Lifting Rods and Bushings.
IN ATTENDANCE: Frank McDonald, Sherwood
Livingston, Arthur Rayfield, A. S. Roebuck, John Long, Jr., Jim Rayfield, Morgan Ruppe, Joe Whitehurst, E. B. Robinson, E. F. Robinson.

son, E. F. Robinson.

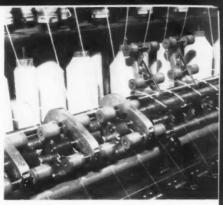
INDERFURTH, KARL H. CO.,
CHARLOTTE, N. C. — (817)

EXHIBIT: Products of firms, represented by
the company—Automatic Fabrics and Automatic Yarn Inspectors, Roving Break
Detector, Statistical Recorder for Machine Down Time, and Photo Scanner,
all by Lindly & Co.
Collins C/B Big Ring Twister for large
package twisting of cotton, tire cord and
glass yarns by Collins Bros. Machine Co.
IN ATENDANCE: Howard Linderman, Vincent Lynch, Daniel Mindheim, Tom Fox,
Henry Collins, K. H. Inderfurth, H. C.
Cobb, Jr., W. R. Geler.

INDUSTRIALAIRE CO., CHARLOTTE, N. C. — (311-312)

INDUSTRIAL COATINGS, INC., GREENVILLE, S. C. — (319) EXHIBIT: Teflon-coated items. In Attendance: H. E. Russell.

INDUSTRIAL DRYER CORP., STAMFORD, CONN. — (110 A) EXHIBIT: H-W Conditioner for cotton knit-ting yarn. IN ATTENDANCE: P. H. Friend, F. W. Caesar.



Norlander-Young Anti-Friction Top Roll Assembly

INTERNATIONAL BUSINESS MACHINES CORP., NEW YORK, N. Y. — (802-803) EXHIBIT: Data Processing Machines, Time Equipment, Electric Typewriters. In ATTEMBANCE: J. H. Temple.

INTERNATIONAL CORRESPONDENCE SCHOOLS, CHARLOTTE,N. C. — (336)
EXHIBIT: Special training services and facilities for the textile industry.
IN ATTENDANCE: U. E. Akins, W. R. Craig,
W. F. Eckard, Ray Gagnon, Harry Kraft.

INTERNATIONAL TEXTILE MACHINERY CO., CHARLOTTE, N. C. --- (215)

IZUMI BOBBIN CO., OSAKA, JAPAN — (362-363) (See—Edward S. Rudnick)

JENKINS BROS., NEW YORK, N. Y. --- (432-433)

JOHNSON CORP.,
THREE RIVERS, MICH. — (459-460)
EXMINIT: Rotary Pressure Joints.
In ATTENDANCE: T. O. Monroe, R. W. Gotschall, H. M. Duvall, Jr., W. T. Harding,
Jr., J. Q. Marshall, L. A. Watts, Jr., W.
E. Hagaman, A. T. Shepherd, A. B. Shepherd, DeWitt H. Skinner, W. Parke Terry,
T. H. Abbey.

KARDBESLAG, A. B., NORRKOPING, SWEDEN — (340-341) (See—Oliver D. Landis)

KEEVER STARCH CO., GREENVILLE, S. C. — (407) No display: space will be used to accom-modate visitors. In Attendance: J. F. Kurtz, A. S. Fulford, C. C. Switzer, F. M. Wallace, R. F. Guill, C. B. Phillips, S. S. Rice.

KEYSTONE LUBRICATING CO.,
PHILADELPHIA, PA. — (402 IN ANNEX #1)
EXIMIST: Specialized Lubricants for all textile machinery; also their No. 29 cartridged open gear Grease.
IN ATTENDANCE: B. N. Melsom, R. J. McGee,
R. M. Goss, N. W. Benjamin, Wm. F.
ROGER.

KIDDE MANUFACTURING CO., INC., BLOOMFIELD, N. J. — (515)
EXHIDIT: New Kidde-Sipp Direct Beamer;
Tension Devices including their Standard, Warp, and Double Disc Compensators;
Tension Measuring Devices, including the new Slasher Tensometer.
IN ATTENDANCE: W. J. Behr, Jr., H. W. Ruddick, E. L. Herbert, O. C. Beagle, D. L. Friday, J. H. Fleming, F. H. Muller.

KIRKMAN & DIXON MACHINERY CO., GREENWOOD, S. C. — (242-243) EXHIBIT: Waste Processing Machines and Hopper Feeder; SRRL Opener; Draft 

LAMBETH ROPE CORP., KINGS MT., N. C. — (223) EXHIBIT: Narrow Fabrics and other items of ATTENDANCE: J. P. O'Leary, Frank Burke.

LANDIS, OLIVER D., INC.,
CHARLOTTE, N. C. — (340-341)
EXHIBIT: Spinning Tape; Tape Bonding Machine; Swedish Cord Clothing and Spinning Rings; Swiss Check Straps; Card Belts and Bands; Steel Picker Rods and Harness Strapping.
IN ATTENDANCE: O. D. Landis, F. E. Antley, V. P. Loftis, Miss Elaine Skipper, John Ferrusson.

LANE BASKET CO., POUGHKEEPSIE, N. Y. — (213) (See—Greenville Textile Supply Co.

LESTERSHIRE SPOOL DIVISION, JOHNSON CITY, N. Y. — (212) (See—National Vulcanized Fibre Co.)

LINCOLN ENGINEERING CO.,

ST. LOUIS, MO. — (509)

EXHBIT: Their new "Power Drive" Pump for individual machine control of a centralized lubricant application system; also lubricant application devices.

IN ATTENDANCE: J. J. Jenkins, J. B. Benskin, A. T. Laspe, E. V. Byington, R. C.

LINDE AIR PRODUCTS CO., NEW YORK, N. Y. — (21)
EXHIBIT: Synthetic Sapphire Guides for spinning and throwing various synthetic yarns; also their Type A and B Alumina spinnerette Polishing Powder.
IN ATTENDANCE: A. K. Seemann, I. Brown, Jr.

LINDLY & CO., MINEOLA, N. Y. — (817) (See—Karl H. Inderfurth)

LIVERMORE, H. F. CORP.,
ALLSTON, MASS. — (109 A)
EXHBIT: Improved Loom Parts designed to
increase production.
IN ATTENDANCE: Chester Hammond, E. W.
Fanning, H. W. Black, W. T. Jordan, F.
T. Harvell, J. B. Kilpatrick, J. G. Phillips, L. G. Urquhart, T. H. MacLeod.

LIVINGSTONE COATING CORP., CHARLOTTE, N. C. — (303)

LOUDEN MACHINERY CO FAIRFIELD, IOWA — (126)
EXHIBIT: Monorall and Crane Equipment:
Loom Cleaner; Celling Cleaner.
IN ATTENDANCE: T. J. Pollard, Wilbur Mayer,
A. M. Rinehart, Brice Gamble.

MACBETH DAYLIGHTING CORP.,

NEWBURGH, N. Y.— (113)
EXHBBT: Color Matching Skylight and other allied equipment pertaining to quality control in the color field.

IN ATTENDANCE: Norman Macbeth, W. B. Reese, R. E. Meeker, E. F. Slaughter, P. Slaughter.

MANTON-GAULIN MFG. CO., INC., EVERETT, MASS. — (504) EXHIBIT: Homogenizer Model TK, also au-tomatic Recording Controller and new Colloid Mill.

G. W. Eldridge, L. H. Rees.

MARCHANT CALCULATORS, INC.,
OAKLAND, CALIF. — (347-348)
EXHIBIT: Calculators, including their new
Deci-Magic, Twin-Set Figurematic, and
RX Rapid Multiplier.
In ATTENDANCE: A. T. Davis, R. B. Pollock,
James F, Rivers, George Singleton, Fred
Grotophorst, A. C. Sims.

MARQUETTE METAL PRODUCTS CO., CLEVELAND, OHIO — (265) EXHIBIT: Cotton Spindles, both warp and filling, Throwing Spindles, and Brake Spindles for twisting.

IN ATTENDANCE: F. E. Harrell, C. E. Miller, C. S. Silkes, W. P. Russell, C. H. White, R. M. Turner.

MARSH STENCIL MACHINE CO.,
BELLEVILLE, ILL. — (349)
EXHBIT: Stencil Cutting Machines, Tape
Dispensers, Felt-Point Pens, industrial
Markers, and Stencil Inks,
In ATTENDANCE: E. J. Marsh, Jack Krause,
Jack Shelton, John Attaway, Bud Wilson,
F. D. Kellett, C. M. Kidd, J. A. Pierce.

MARSHALL & WILLIAMS,
GREENVILLE, S. C. — (262-263)
EXHBIT: Tenterette, Constant Tension Center Winder, Selvage Uncurier, Swivel Letoff Stand, Tenter Clips, and Pin Plates.
In Attendance: Richmond Viall, J. C. Nash,
F. H. Land, J. A. Love, E. E. Ford, A. J.
Marshall, William Brown.



MATHEWS CONVEYOR CO., ELLWOOD CITY, PA. — (601) (See—W. D. Dodenhoff Co.)

M-B PRODUCTS, DETROIT, MICH.— (229 A) EXHBIT: Pneumatic Roll Pickers, Air Line Filters, Pressure Regulators and Lubri-

CATTENDANCE: I. Manheimer, W. F. Hur-ley, R. C. Hurley, J. W. Davis.

McDONOUGH POWER EQUIPMENT, INC.,

McDONOUGH, GA. — (321)

EXHIBIT: Universal Card Coller.

IN ATTENDANCE: J. L. Simback, H. P. Jackson, F. C. Steele, W. N. Watkins, T. M. Van Landingham, W. A. Wallace.

MERROW MACHINE CO., HARTFORD, CONN. — (234) (See—Hollister-Moreland (

MELTON CORP.,
NEW YORK, N. Y. — (212 A)
EXHIBIT: Their new Melton with Mylar and
regular Metlon metallic yarns, and how
the yarns are made.
IN ATTENDANCE: A. C. Brucks, K. H. Inderfurth, Hayden Cobb, Walter Geier, Will
Plowden, Dave Williams, K. S. Hunt.

MINNESOTA MINING & MFG. CO., ST. PAUL, MINN. — (453-454) (See—American Lava Corp.)

MITCHELL-BISSELL CO., TRENTON, N. J. — (465) (See—R. E. L. Holt, Jr.)

MODERN TEXTILES MAGAZINE, NEW YORK, N. Y. — (120)

MOFFATT BEARINGS CO.,
PHILADELPHIA, PA. — (266)
EXHIBIT: Complete line of antifriction bearings; Cooper split roller bearing unit.
IN ATTENDANCE: O. S. Livingston, E. Neely,
Henry McCard, B. M. Ivey, R. M. Womble, J. L. Blackwell, W. B. Osborne, D. G.
HOrnbaker, J. R. Milford, J. R. Dean, S.
D. Zeanah, A. Q. Davis, R. L. Keefe.

MOISTURE REGISTER CO., ALHAMBRA, CALIF. — (338) EXMIST: Electronic Moisture Testing Instru-ments for textile materials IN ATTENDANCE: J. R. Barnes, Tom Ayde-

MOMAR, INC.,
ATLANTA, GA. — (361)
EXHIBIT: Products for the complete maintenance in the mill, floors, walls and woodwork, also for machinery; Hand Soap

ATTENDANCE: J. E. Nelson, Sam Marcus, J. B. Mohr, J. A. Kaufman, Emile Michael, Charlie Trum.

ONA INDUSTRIES, INC.,
PATERSON, N. J. — (403)

EXHIBIT: Improved model Monalit Yarn
Conditioning Machine; Monarc yarn conditioning attachment for Abbott Automatic
Quiller; their textile Moisture
Motor

Meter.

MONROE CALCULATING MACHINE CO., ORANGE, N. J. — (343-345) EXMINIT: Calculating, Adding, and Account-ing Machines. IN ATTENDANCE: R. F. Keiling.

MORTON SALT CO., CHICAGO, ILL. — (353) No special display. In ATTENDANCE: Ashby Cameron, Clark Nadherny, John Smith, Berge Neill, John Mullinax, Ed Ravenel, J. C. Drake, J. M. Culp, V. L. Donahue.

MOUNT HOPE MACHINERY CO.,
TAUNTON, MASS. — (114)
EXHIBIT: The concept of "Machine Teamwork" will be demonstrated by the Mount
Hope System consisting of Free Wheeling
Expander, Vari-Bow Expander, Bowed
Weft Straightener, Floating Roll Guide,
Continuous Roll Feed (Model OSA),
Selvage Uncurlers, Center Bar Let-off and
Open Width Tension Device.
IN ATTENDANCE: J. D. Robertson, J. B. Hammett, W. M. Gallahue, S. A. Moffitt, J.
Basic, E. F. Slaughter, P. H. Slaughter,

MULLER, FRANZ, GREENVILLE, S. C. — (827) (See—Parrot & Ballentine)

MURPHY, T. J. FUR CO., LEWISTON, ME. — (221) (See—Batson Mfg. Co.)

NATIONAL CARBON CO., ATLANTA, GA. — (365) EXMUNT: "Eveready" Flashlight Cases and Batteries; "National" Seal Rings, Bear-ings, Brushes, Electrodes and Powders; and other carbon and graphite special-

ATTENDANCE: C. F. Bishop, H. M. Rut-ledge, Morgan Henika, C. T. Tullis, Jr.

NATIONAL PLASTICS, INC.,
KNOXVILLE, TENN. — (ANNEX #6)
EXHUBIT: Plastic Loom Sheaves, Tape Tension Idlers, 10° Drive for individual spinning drives, plastic Separators, Roving Can and Cart Covers.
IN ATTENDANCE: C. Van Devenger, III, C. L. Yeomans, Jr., H. A. Haynes, Elmer Schraden.

NATIONAL RING TRAVELER CO.,
PAWTUCKET, R. I. — (214)
EXHIBIT: Steel and bronze Twisting Trav-

IN ATTENDANCE: F. L. Chase, Jr., L. E. Taylor, T. H. Ballard, F. S. Beacham, D. C. Creech, H. D. Lanier.

NATIONAL STARCH PRODUCTS, INC., NEW YORK, N. Y. — (436-437) EXHIBIT: Starch and Resin specialties for the textile industry. In Attendance: J. F. Fitzgerald, I. L. Dow-dee, D. R. Lassiter, H. M. Smith, E. J. Maslanka, H. C. Olsen.

NATIONAL VULCANIZED FIBRE CO., WILMINGTON, DEL. — (212, 473)
EXHIBIT: In Booth 212—complete line of Lestershire Bobbins and Spools. In Booth 473—Kennett Materials Handling Equipment including Trucks; seamless Roving Cans, Mill Boxes and Trays.
IN ATTENDANCE: E. B. Burnley, Samuel Sinclair, L. W. Phelps, G. M. Lang, R. G. Henderson, C. C. Hannum.

NEMO INDUSTRIES, INC.,
ATLANTA, GA. — (320)
EXHIBIT: Nemo Camera, a combination of
devices which permits instantaneous reading of pick clocks, hank clocks and other
types of meters on movie film; also their
Jet Cooker.
IN ATENDANCE: N. E. Elsas.

NEW DEPARTURE. EW DEPARTURE,
BRISTOL, CONN. — (128)
EXHIBIT: Textile types of Bearings.
IN ATTENDANCE: L. F. SWOYER, R. D. Brouwer, W. S. Matthews, L. C. Freeman, Jr.,
J. P. Gillilan, R. E. Honeycutt, R. S.
Walker, Langdon Johnson, Bruce Demp-

NEW ENGLAND PAPER TUBE CO., PAWTUCKET, R. L. — (130) (See—Watson & Desmond)

NEW YORK & NEW JERSEY LUBRICANT CO. NEW YORK, N. Y. — (109) EXHIBIT: Non-Fluid Oil, featuring latest, improved types and grades for textile in-

S ATTEMANCE: J. H. Bennis, I. L. Hall, L. W. Thomason, R. F. Bagwell, A. M. Cowan, F. W. Phillips, F. W. Winecoff, J. A. Sorrells.

NIPPON SPINDLE CO., OSAKA, JAPAN — (362-363) (See—Edward S. Rudnick)

NORLANDER-YOUNG MACHINE CO., GASTONIA, N. C. — (317) EXHIBIT: Completely anti-friction Spinning Frame in operation; their new Lint-Tuff Revolving Clearer; flyer finish Perma-

ATTENDANCE: C. J. Webster, J. Lindsay, E. E. Hayes, Bob Wright, Thomas White.

NORRIS BROTHERS, GREENVILLE, S. C. — (465-469) (See—R. E. L. Holt, Jr.)

NUTTING TRUCK & CASTER CO., FAIRBAULT, MINN. — (508 B) EXHIBIT: Floor Trucks, Casters and Wheels. IN ATTENDANCE: J. W. Abelson, S. R. Brook-shire, V. Brookshire, E. R. Lusk, B. Wil-liams, Jack LeClair, Crosby Winters, Al White.

OAKITE PRODUCTS, INC.,
NEW YORK, N. Y. — (339)
EXHIBIT: Various types of Cleaning equipment and materials.
IN ATTENDANCE: R. F. Kipp, B. F. Swint, D.
O. Mundale, H. W. Kole, L. T. Prince.

ODELL MILL SUPPLY CO., GREENSBORO, N. C. — (213) (See—Greenville Textile Supply Co.)

OLNEY PAINT CO., SPARTANBURG, S. C. — (426-427)

O-M SPINNING MACHINE MFG. CO., LTD., OSAKA, JAPAN — (362-363) (See—Edward S. Rudnick)



Seydel-Woolley Seyco Warp Lubricator

ORR FELT & BLANKET CO. PIQUA, OHIO — (116)
EXHBUT: Slasher Cloth and Clearer Cloth.
IN ATTENDANCE: M. B. Orr, Robert Purdy,
O. J. Landis, Fred Antley, Peter Loftis.

OWINGS, RICHARD A., CO., GREENVILLE, S. C. — (318)

PADDOCK, J. C. CO., SPARTANBURG, S. C. — (439)

SPARKARBORG, S. C. — (439)
PARKS-CRAMER CO.,
FITCHBURG, MASS. — (502)
EXMISIT: Systems of Air Conditioning and
Humidification; Traveling Cleaners; also
Spinning Frame Creels and Vacuum and
Collection Equipment.
IN ATTENDANCE: Sales and Executive personnel from all divisions including White
and Company and Spin Sa Vac Corp.,
both Charlotte, N. C.

PARKS, M. H. CO., WINCHENDON, MASS. — (229 A)

PARKS & WOOLSON MACHINE CO., SPRINGFIELD, VT. — (222)

FARROTT & BALLENTINE,
GREENVILLE S. C. — (827 IN ANNEX #5)
(Representing Franz Muller Maschinenfabrik, Krefeld, Germany)
EXHBIT: Muller 36-Roller Tri-Napper,
IN ATTENDANCE: Siggfried Schmidt, August
Hoverath, J. M. Ballentine, Sam Huffsteller, P. M. Parrott.

PENICK & FORD, LTD. INC., CEDAR RAPIDS, IOWA — (430-431)

PENNELL, GEORGE H.,
GREENVILLE, S. C. — (323)
EXHIBIT: Ramset fastening equipment,
Shure-Set hammer-driven tool, Rust Cutter penetrating oil.
In ATTENDANCE: G. H. Pennell, C. L. Gar-

IN ATTENDANCE: Grett, J. T. Black.

PERFECTING SERVICE CO., CHARLOTTE, N. C. — (409)

PERMACEL TAPE CORP., NEW BRUNSWICK, N. J. — (301) EXHIBIT: All types of pressure sensitive Tapes. In Attendance: J.W. Hagaman, R. Klemm.

PIONEER LOOM & REED CO., ATLANTA, GA. — (213) (See—Greenville Textile Supply Co.)

PITTSBURGH CORNING CORP., PITTSBURGH, PA. — (201) Ехният: Foamglas Insulation and PC Glass Blocks.

In Attendance: H. G. Jones, W. H. Polk, R. T. Thomas, C. A. Golladay.

PNEUMAFIL CORP.,
CHARLOTTE, N. C. — (700)
EXHBIRT: Their Economizer Unit, Pneumastop, CAH System, CMR System, Lint Free Creel, Tension-rite Bobbin Holder, and PneumaClear.
IN ATTENDANCE: C. R. Harris, J. W. Stuart, Perry Clanton, Wes Henderson, George Archer, Ed Williams, Arch Cutting, Dave Thorp, Jesse McCall.

Thorp, Jesse McCall.

POE HARDWARE & SUPPLY CO.,
GREENVILLE, S. C. — (229)
EXHIBIT: Rust-Oleum Paint; Temperature
Regulators and Thermometers: Boston
"V" Belts; and DeWait Radial Arm Saw.
IN ATTENDANCE: R. L. Ferguson, Olin Jones,
Lamar Kirby, R. L. Logan, Ben Larson,
W. C. McDonald, W. F. Dashiell, R. F.
O'Leary, Carter Poe, W. T. Henderson,
Jr., T. A. Stone, J. W. Brissey, J. M.
Hood, J. J. Swan, J. W. Blakely, C. A.
Weber, R. L. Finley, J. T. Hardy, Russell
Ellerbe, Harry Graham, Paul Hannah,
Herman Moore, Furman Massey.

PRECISION GEAR & MACHINE CO., CHARLOTTE, N. C. — (508 A)

PROCTOR & SCHWARTZ, INC.,
PHILADELPHIA, PA. — (256)
EXHIBIT: Photos will be displayed and information available on the following equipment: Their new Roller Curer; Loop Ager; Tenter Housings; Hot Air Slasher 'also to be seen in model cross-section'; Equipment for the Tufted Carpet Industry, for making Non-Woven Fabric, for Blending; Carding and Preparatory Equipment; Batt Making Equipment; Con-Omatic Washer; Continuous Bleach System; Loop Dryer and Curer; Continuous Open Width Steamer; Multipass Air-Lay Dryer. matic Washer; Continuous Bleach System; Loop Dryer and Curer; Continuous Open Width Steamer; Multipass Air-Lay Dryer.

ATTENDANCE: W. H. Poole, C. W. Schwartz, 4th, R. L. Hendricks, T. A. Mahan, H. G. Black, J. P. Christ.

PRODUCT SALES INC.,
WHITMAN, MASS.— (271)
EXHIBIT: Top Rolls for spinning and roving,
capbarless Saddle, Top Roll Weight Tester,
and Spinning Changeover.
IN ATTENDANCE: F. H. Cotton, G. W. Parkinson, R. L. McCauley.

PROGRESSIVE ENGINEERING, INC., PAWTUCKET, R. I. — (130) (See—Watson & Desmond)

PURE OIL CO.

URE OIL CO.,
CHICAGO, ILL. — (513)
EXHIBIT: Folders and technical information
on their industrial Lubricants.
IN ATTENDANCE: B. W. Parsons, P. M. Wilson, B. C. Parrish, H. H. Halstead, L. C.
Hollingsworth, Bill Elam, Joe Cooper,
Rob Marrison, Bob Morrison.

PURITAN CHEMICAL CO., ATLANTA, GA. — (421-422) EXHIBIT: Industrial Chemicals. In Attendance: T. V. Fisher, C. E. Braun, E. P. Collins, Harry Collinson, Curtis Shugart, Jack Burke.

RAGAN RING CO., ATLANTA, GA. — (105)

REEVES PULLEY CO., COLUMBUS, IND. — (257-258)

REINER, ROBERT, WEHAWKEN, N. J. — (121-122)
EXHIUT: New Warper for up to 44" beams, Reiner-Menschner Cloth Inspection and Defect Marking machine, Reiner-Famatex Tenter Frame Model.

IN ATENDANCE: Walter Horn, William Whary, Alexei Woelz.

RELIANCE ELECTRIC & ENGINEERING CO., CLEVELAND, OHIO — (147)

RICE DOBBY CHAIN CO., MILLBURY, MASS. — (465-469) (See—R. E. L. Holt, Jr.)

RIDGE TOOL CO., ELYRIA, OHIO — (461-462) EXHIBIT: New "Ridgid" 200 Tripod Power Drive and new "Ridgoilr" for flooding dies with cutting oil. IN ATTENDANCE: W. L. Parcell, R. D. Fye, W. B. Williams, Ralph Hamlin.

ROBERTS CO., SANFORD, N. C. — (142)
SANFORD, N. C. — (142)
EXHBIT: Spinning Frames, ball bearing Spindles, Suction Cleaning, AeroCreels, ball bearing Top Suspension systems. IN ATTENDANCE: R. E. POMETAIZ, J. N. POMETAIZ, R. D. Padgett, C. E. Oliver, F. R. Walker, G. C. Cater, M. C. Golden, W. Bowlin, W. C. Robinson, F. T. Glass.

ROTHERM ENGINEERING CO., INC., CHICAGO, ILL. — (216) Exhibit: Models of Revolving Joints on dry can units, also Expansion Joints for steam ATTENDANCE: H. S. Kuhn, H. D. Hohm.

ROY, B. S. & SON CO., WORCESTER, MASS. — (207)

WORCESTER, MASS. — (207)

RUDNICK, EDWARD S.,
NEW BEDFORD, MASS. — (362-363)

EXHEBIT: Products of Japanese firms, represented by the company, as follows: Spinning and Drawing Frame by O-M Spinning and Drawing Frame by O-M Spinning Machine Mfg. Co.; Clearer System, Spindles, Rings and ACS Continuous Card Stripper by Nippon Spindle Mfg. Co.; Spinning and Roving Bobbins by Izumi Bobbin Co.; Shuttles by Godo Shuttle Co.; Ring Travelers by Kanai Traveler Mfg. Co.; Card Clothing Samples by Nippon Card Clothing Co.

IN ATTENDANCE: E. S. Rudnick, S. Tominaga, and spinning engineers.

haga, and spinning engineers.

SACO-LOWELL SHOPS,
GREENVILLE, S. C. — (828)
EXHIBIT: New Versa-Matic high production
Drawing Frame; Model 56 Comber;
Gwaltney Spinning Frame with Model
SG3-J Drafting Element; Spinning Frame,
one side fitted with their regular StayClean Drafting Assembly, the other with
the new Truset Top ARM carrying a
Standard Duo-Roth Drafting Element.
IN ATTENDANCE: W. F. Lowell, E. J. McVey.

Terrell Type M Roving Bobbin Cleaner with **Bobbin Box Hoist** 

SCHARER TEXTILE MACHINE WORKS, ERLENBACH-ZURICH, SWITZERLAND— (ANNEX #6) (With Yeomans Textile Machinery Co.) EXHBIT: Automatic Bobbin Winders in operation.

ATTENDANCE: Jacques Scharer, Kaspar Laager, Otto Zollinger.

SCHLAFHORST, W. & CO., M. GLADBACH, GERMANY — (ANNEX #3) (See—Terrell Machine Co.)

SCOTT TESTERS, INC., PROVIDENCE, R. I. — (401) EXHIBIT: New double-screw drive super-precision Tester, Model CET. IN ATTENDANCE: D. C. Scott, John Klinck, J. E. Hargreaves.

SELIG CO., INC.,
ATLANTA, GA. — (232)
EXHIBIT: Complete equipment and material
for Floor maintenance.
IN ATTENDANCE: W. F. Bode, Alvin Hamburger, Charles Pearl, Lee Strasburger, A.
L. Schwab, Milton Doctor, C. M. Vickery,
W. E. Digges.

SEYDEL-WOOLLEY & CO., ATLANTA, GA. — (238) Exhuart: New Seyoo-Warp Lubricator; work-ing model of their Niagara-Twist Setter Yarn, Conditioner with glass sides; Seyco

IEXLUE Chemicals, & ATTENDANCE: Vasser Woolley, Paul Seydel, John Seydel, A. W. LaGrone, Walter Whisnant, Eddie Harrison, Francis deLoach, W. H. Cutts, V. R. Mills, David Meriwether, R. P. Anthony, T. H. McCamy, textile chemicals.

SHELL OIL CO., NEW YORK, N. Y. -- (805)

SIGNODE STEEL STRAPPING CO., CHICAGO, ILL. — (404 IN ANNEX #1) EXHIBIT: Latest Power Strapping tools and

machines.
ATTENDANCE: C. H. Carlson, S. W. Brown,
J. H. Burch, C. E. Talbutt, M. Helsey, T.
D. Freeman, A. S. Stephens, J. F. Redford.

SINCLAIR REFINING CO.,
NEW YORK, N. Y. — (103)
EXHIBIT: No-Drip Lubricants, Spindle Oils
and Loomtex Grease.
IN ATTENDANCE: F. W. Schwettmann, G. R.
Dyer J. O. Holt, J. M. Mathers, H. G.

Lane.

SIRRINE, J. E., CO., GREENVILLE, S. C. — (205) No display. Space to be used as reception room.

room.

N ATTENDANCE: A. D. Asbury, F. B. Bozeman, R. R. Adams, A. S. Bedell, J. H. Bringhurst, Jr., L. W. Burdette, J. W. Cantrell, W. A. Cox, George W. Cumbus, L. S. David, H. S. Forrester, H. W. Frederick, O. F. Going, C. E. Hatch, Jr., M. C. Kendrick, Milton Lite, H. L. McDonald, J. T. Mallard, F. M. Martin, G. R. Morgan, W. H. Nardin, G. P. Patterson, J. L. Roberson, W. A. Robinson, L. A. Seaborn, J. F. Spellman, M. M. Stokely, H. C. Swannell, C. T. Wise, George Wrigley, Jr.

S K F INDUSTRIES, INC., PHILADELPHIA, PA. — (510)

SLIP-NOT BELTING CORP. GREENSBORO, N. C. —

SNOWISS, B. FUR CO., LOCK HAVEN, PA. — (454 (See—R. E. L. Holt, Jr.) (454, 465-469)

SOCONY MOBIL OIL CO., INC., NEW YORK, N. Y. — (309-310) EXHIBIT: Featuring their new Mobil DTE Oils, they will have a "Quiz Show" with the audience asked to participate. IN ATERNANCE: C. S. Simmons.

SONOCO PRODUCTS CO., HARTSVILLE, S. C. — (244) EXHIBIT: Paper Cones, Tubes, Cores, Spools and other textile specialties; Molded Bob-





Uster Automatic Yarn Strength Tester with Multiple Bobbin Attachment

bins, Sleeves, Cores and Tubes; Plastic Spools; Fibre Pirns ann Spools; Cork and Synthetic Rubber Cots and Rolls.

8 ATTENDANCE: C. W. White, W. K. Lewis, Jr., J. K. Taylor, L. K. Stokes, R. V. Blackwell, Allen Carter, C. H. Campbell, L. C. Wall, W. B. Broadbent, P. F. Williams, W. M. Carpenter, B. H. Biggs, W. R. Peacock, C. B. Harper, J. A. Reagan, Jr.

SOUTHEASTERN LOOM & MACHINE WORKS, GREENVILLE, S. C. — (131-133) EXHIBIT: Looms and loom parts; Card and Drawing Coilers; Spinning Frame Pulley Spindle Drives; Pumps. IN ATTENDANCE: Ch. Still, H. C. Whitmire, J. C. Galloway, J. A. Moore.

SOUTHEASTERN SAFETY APPLIANCE CO., ATLANTA, GA. — (346) EXHIBIT: Fire Extinguishers, First-Aid supplies, breathing equipment, and Safety devices.

IN ATTENDANCE: G. D. Johnson, W. E. Bed-dingfield, P. H. Ellington, J. L. Duffy.

SOUTHERN STATES EQUIPMENT CORP., HAMPTON, GA. — (267)
EXHIBIT: Card Drive, Comb Box and Coiler Conversion equipment.
IN ATTENDANCE: C. W. Walter, C. H. Kennington, W. H. Knapp, Frank Birchfield, R. L. Williams, John Walters.

SOUTHERN WEAVING CO., GREENVILLE, S. C. — (340-341) (See—Oliver D. Landis, Inc.)

SPAULDING FIBRE CO.,
BALTIMORE, MD. — (359)
EXHIBIT: Materials Handling Equipment;
Roving Cans, Trucks and Boxes; Accessory Equipment such as Bobbins, Lap
Spools, Take-up Tubes, Pirn Caps, etc.
IN ATTENDANCE: D. F. Dawson, R. L. Cobb,
Joe Pazdan, Bruce King, R. D. Marsh,
Jack Carrol.

SPIN SA VAC CORPORATION, CHARLOTTE, N. C. — (502) (See—Parks-Cramer Co.)

STANLEY, A. E. MFG., CO.,
DECATUR, ILL. — (412-413)
EXHIBIT: Starches and Dextrines.
IN ATTENDANCE: W. N. Dulaney, D. A.
Barnes, H. H. Ector, C. H. Garren, E. H.
Grosse, N. N. Harte, Jr., L. J. McCall, H.
A. Mitchell.

STANLEY WORKS,
NEW BRITAIN, CONN. — (145)
EXHBIT: Steel Strapping Division—The new
"Jet" Pneumatic Strapper and other
strapping equipment.
Magic Door Division—Model, showing
doors controlled by Stanley Pneumatic
operators, photoelectrically or by pull

cord.
In ATTENDANCE: C. K. Nichols, J. R. Tlanda,
F. M. Hatcher, J. T. Cobb, A. N. Stall,
T. L. Bobbitt, B. Rish, A. H. Hill, J. C.
McGunnigal, J. A. Dickson, T. P. West,
W. L. Tolson, Jr., R. F. Brown, C. J.
Turpie.

STA-WARM ELECTRIC CO., RAVENNA, OHIO — (360) (See—W. K. Hile)

STEDCO SOUTHERN, INC., GREENSBORO, N. C. — (46 (See—R. E. L. Holt, Jr.)

TEEL HEDDLE MFG. CO.,
GREENVILLE, S. C. — (137)
EXHIBIT: Loom Harness Equipment, including their patented Drawtex type, also their standard Flat Steel Heddle; line of Warp Preparation Equipment. Their Southern Shuttle Div. will show its complete line of Shuttle. plete line of Shuttles.

In Attendance: H. W. Fehr, F. H. Kaufmann, A. J. Kieny, J. J. Kaufmann, Jr., J. B. Bowen, G. D. McGill, J. I. Long, H. P. Goodwin, S. R. Zimmerman, D. L. Batson, H. I. Cash, John Neuffer, R. B. Stevens, Wesley Hixon, B. D. Pritchett, J. C. Jacobs, Dave MacIntyre.

STEELE CANVAS BASKET CO., INC., CAMBRIDGE, MASS. — (355) EXHIBIT: Canvas Trucks, Hampers, Baskets and Bags. In Attendance: G. L. Whynaught.

STEIN, HALL & CO., INC.,
NEW YORK, N. Y.— (442-443)
EXHBIT: Cloth samples finished with their
product Vinrez 202 and RTC, and printed
fabrics produced with their Bondrez 844M, 501 and 666. Tapioca Flour.
IN ATENDANCE: Edwin Stein, Lawrence
Gussman, D. H. Lipman, L. F. Costello,
N. H. Nuttall, E. D. Estes, D. E. Truax,
J. B. Wathey.

STELLITE AMERICAN CORP

TELLITE AMERICAN CORP., NEW YORK, N. Y. — (835)
EXHBIRT: Equipment of European Manufacturers, represented by the company: Pneumatic Cleaners for spinning frames and Rotafils by Thoma Co., Zurich, Switzerland. Counters and Pick-Counters by N. Zivy & Cie., Basel, Switzerland; Spindles, Drafting Elements and Spinning Equipment by A. Carniti & Co., Oggiono, Italy; Knotters and Constant Tension Continuous Winding Tester by Cook & Co., Manchester, Ltd. Strength and Elongation Yarn Tester Autodinamografo by Fabbriche Elettrotechniche Riunite, Milan, Italy.

Kraehshuetz, H. P. Levy.

STERLING ENG. & MFG. CO., WILKES-BARRE, PA. — (217) EXHIBIT: Self-stacking bobbin, cone, and quill boards and yarn had trucks. IN ATTENDANCE: George McGee.

STEWART, PAUL, MACHINE CO., GASTONIA, N. C. — (318)

GASIONIA, N. C. — (316)
STRANDBERG ENGINEERING LABS. INC.,
GREENSBORO, N. C. — (324)
EXHBIT: Monitor line of slasher and finishing machinery moisture indicating and control instruments, including their new Picker Tare Weight Indicator.
IN ATTENDANCE: C. F. Strandberg, C. L. Miller, Jr., R. G. Holyfield.

SUNRAY CO., SPARTANBURG, S. C. — (213) (See—Greenville Textile Supply Co.)

SUPERIOR BOLSTER CO., GASTONIA, N. C. — (326)

SYKES FOUNDRY & MACHINE CO., INC., BURLINGTON, N. C. — (505) EXHIBIT: Cloth Room equipment, including Grading Frame, Roll-up Machine and Air Guide; also Slubbing Attachments for spinning and twisting, and Loom Parts, In Attendance: K. C. Sykes, A. R. Miles.

SYLVANIA ELECTRIC PRODUCTS, INC., GREENVILLE, S. C. -- (449)

TALCOTT, INC.,
PROVIDENCE, R. I. — (406)
EXHIBIT: Industrial Belt Fasteners for flat
leather transmission belting, including
their Crown Wilson and Combination

IN ATTENDANCE: J. W. Chase, R. T. Chase.

TAYLOR INSTRUMENT COS.,

ROCHESTER, N. Y. — (428)

EXEMBET: New Transet Potentiometer Transmitter for pH control: Taylor Volumetric

Load Elements for measurement tension
and compression in pad dyeing; Control

System for high speed slashing; their new
Bi-Therm bi-metallic Dial Thermometers
for textile process applications.
IN ATTENDANCE: H. G. Olson, L. H. Van
Huben, H. M. Messenger, G. E. Heller, W.
C. Gray, R. S. Peterson, J. Barker, H.
M. Barker, J. Burnett.

TENNANT, G. H., CO., MINNEAPOLIS, MINN. -- (450)

MINNEAPOLIS, MINN. — (450)

TERRELL MACHINE CO.,
CHARLOTTE, N. C. — (ANNEX #3)

EXHIBIT: Schlafhorst Autocopser automatic
filling winder with boxing attachment for
cotton and spun winding; Termaco Bobbin Feeders; Termaco Bobbin Selectors
and Bobbin Box Hoists; new Type M
Roving Bobbin Cleaning Machine; Denman Loop and Box Loom Pickers as well
as other rubber and fabric loom supplies.
IN ATENDANCE: W. S. Terrell, Dr. Walter
Reiners, H. Deussen, M. H. Ridenhour, J.
E. Scott, D. Black.

TEXAS CO., ATLANTA, GA. — (424-425) Ехнівіт: Special textile Lubricating Oils

West Point Automatic Three-Stage Friction Beam Drive

and Greases for textile mill equipment; enclosed fountain spray featuring Texspray Compound.

Attendance: F. G. Mitchell, D. C. Rand,

S ATTENDANCE: F. G. Mitchell, D. C. Rand, W. L. Armstrong, K. T. Gardiner, J. A. Bucklin, A. C. Keiser, Jr., L. C. Mitchum, J. W. Kay, F. A. Boykin, R. Brown, C. L. Adams, W. M. James, R. E. Werder, J. M. Hackney, F. M. Edwards, W. B. Warner, C. T. Hardy, J. H. Murfee, C. W. Meadors, W. S. Futch.

TEXIZE CHEMICALS, INC., GREENVILLE, S. C. — (411) No display. Space will serve to accommo-

No display. Space will serve to accommodate visitors.

In Attrensance: W. J. Greer, W. N. Kline,
Jr., C. M. Chalmers, J. A. McNeill, W. M.
Greer, R. L. Parker.

TEXTILE AGE, COS COB, CONN. — (123)

TEXTILE BULLETIN, CHARLOTTE, N. C. — (204)

TEXTILE INDUSTRIES, ATLANTA, GA. — (408)

TEXTILE SHOPS, SPARTANBURG, S. C. — (138)

TEXTILE WORLD, NEW YORK, N. Y. — (224-225) TEXTUBE CORPORATION, STAMFORD, CONN. — (130) (See—Watson & Desmond)

THELLER, N. J. CORP.,
WHITINSVILLE, MASS. — (816)
EXHIBIT: Single eylinder double lift Cam
Dobby Type LECK a22 and Card Cutting
and Copying machine Type N to cut patterns for the Staubli Head Motion.
IN ATTENDANCE: H. J. Theiler, Othmar
Staubli, Hans Badertscher, H. S. Singer,

F. Bolliger

THOMASON TEXTILE SERVICE, INC., CHARLOTTE, N. C. — (269, 269 A)
EXHIBIT: Demonstration of their quality control program and testing services available to mills, featuring a complete laboratory with Uster Spectrograph, Hi-Lo Indicator, and Automatic single Strand Strength Tester.

IN ATTENDANCE: W. A. Thomason, Jr., Leroy Dalton, W. R. Beaver, D. R. Helms.

TOLEDO SCALE CO.,
TOLEDO, OHIO — (455)
EXHIBIT: New portable Cotton Lap Scale
with Automatic Printweigh; line of
weighing equipment for the textile in-

weigning equipment of dustry.

ATTERNANCE: M. W. Mengel, G. H. Webb,

H. B. Sanford, W. F. MacKinnon, C. H.

Cadwallader, E. B. Heape, W. S. Heape.

TON-TEX CORP., N. J. — (467)
EXHIBIT: (See R. E. L. Holt)
IN ATTENDANCE: J. S. Meyers, T. A. Lombardi, R. E. L. Holt, D. R. Sellars, F. A.

RUMETER CO.,
NEW YORK, N. Y. — (228)
EXHBIT: Measuring Machines and Counting
and Measuring Instruments.
IN ATTENDANCE: Eric Seligmann, Rene Jacobus, Tom Aydelette, J. F. Slaughter.

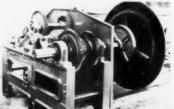
TRUSCON LABORATORIES,
DETROIT, MICH. — (325)
EXMURT: Maintenance finishes, paints and
coatings for walls, floors and equipment.
IN ATTENDANCE: E. F. Strub, D. C. Schmidt,
F. A. Ricketts, R. J. Emerson, Jr.

UNION BAG-CAMP PAPER CORP.,
NEW YORK, N. Y. — (350-351)
EXHIBIT: COTTUGATED BOXES, packed with
yarn, finished fabrics and other products.
IN ATTENDANCE: J. W. Butler, R. C. Day, T.
J. Fahey, F. P. Grimes, J. T. Hough, H.
A. Murrill, Jr., A. Smith, Jr.

A. Murrill, Jr., A. Smith, Jr.
UNIVERSAL WINDING CO.,
PROVIDENCE, R. I. — (826)
EXHIBIT: Unifil Loom Winder; Unirail Uptwister; Model 10 Ring Twister; #595
Take-up Machine; #50 Winding Machine.
In Attendance: R. Leeson, R. S. Pennock,
T. L. Cotter, E. C. Parish, F. P. Barrie,
F. J. Barrows, J. W. Stribling, J. R.
Breen, H. D. Kerman, L. E. French, H.
H. Richardson.

S. BOBBIN & SHUTTLE CO., GREENVILLE, S. C. — (127) EXHIBIT: Bobbins, Spools and Shuttles. IN ATTENDANCE: Jack Locke, R. L. Carroll, J. C. Fulling, C. W. Hite, M. L. Johnston,

Hugh Stephe





Watson & Williams Multi-Purpose Shuttles

S. RING TRAVELER CO., GREENVILLE, S. C. — (801) EXHIBIT: Travelers of various sizes and styles,

ATTENDANCE: L. W. Doel, H. J. Smith, O. B. Land, H. R. Fisher, W. H. Rose, R. V.

TEXTILE MACHINE CO

. S. TEXTILE MACHINE CO., SCRANTON, PA. — (249-250)

EXHIBIT: Latest models of Throwing and auxiliary equipment.

IN ATTENDANCE: P. J. Thomas, A. W. Thomas, Jr., F. C. Nave.

USTER CORP

STER CORP.
CHARLOTTE, N. C. — (700)
EXHBUT: Complete line of their Testing
Equipment; Uster Warp Tying Machine.
IN ATTENDANCE: W. B. Floyd, Hans Winiger,
G. F. Mills, B. E. Sweet, V. H. Brockman,
J. W. Taylor, Rudolph Nichols, Eric

VEEDER-ROOT INCORPORATED, HARTFORD, CONN. — (107) EXHBIT: Complete line of textile Counters. IN ATTENDANCE: A. E. Kallinich, G. L. Lo-gan, T. Nelson. F. J. Swords, R. C. Con-ant, H. E. Mansfield, H. B. Huff.

VERMONT SPOOL & BOBBIN CO., BURLINGTON, VT. — (130) (See—Watson & Desmond)

VICTOR RING TRAVELER CO. PROVIDENCE, R. I. — (218

PROVIDENCE, ...

WALWORTH CO., NEW YORK, N. Y. — (809-810)

EXHIBIT: Valves and Pipe Fittings.

EN ATTENDANCE: M. H. Luttrell, J. J. Burke,

E. L. Charlton, E. W. Edgerton, L. P.

WARREN BELTING CO., WORCESTESR, MASS. — (229 A) (See—Wilson F. Hurley)

WATSON & DESMOND, CHARLOTTE, N. C. — (130) Products of the firms represented by them as follows:

as follows:
EXHIBIT: Watson & Williams—Shuttles; TexTube Corp.—Paper Tubes and Bobbins;
Zinser—SkF Antifriction Spindles; Reiners & Furst—Spinning and Roving Rings
and Knotters; Progressive Engineering—
Antifriction Top Rolls for Spinning and
Roving; Dana S. Courtney—Bobbins; Vermont Spool & Bobbin—Spools and Bob-

bins: United Bobbin-Roving Bobbins; bins; United Bobbin-Roving Bobbins; Vulcanized Rubber & Plastice-Plastic Bobbins; N. E. Paper Tube-Dye Tubes; Eugen Maier-Flyers; R. N. Taylor-Shuttle Fur; Walton Labs-Humidifiers; Dubo-Spindle Lockwashers; Schoefield-Drawing Frame Condensers; Mettler-Cone Holders; Geidner-Perforated Stainless Steel Tubes and Cones; Emil Adolft—Paper Tubes

less succi rubes and Cones, Emil Adom-Paper Tubes.

ATTENDANCE: S. P. V. Desmond, C. E. Watson, R. V. McPhall, J. N. Dodgen, E. E. Ball, H. K. Smith, John Wyatt, R. A. Norman.

WATSON-WILLIAMS MFG. CO., MILLBURY, MASS. — (130) (See—Watson & Desmond)

WEST DISINFECTING CO., RICHMOND, VA. — (352) EXHBUT: Floor maintenance products; Insectidides, Disinfectants, etc. IN ATTENDANCE: Chester Powell, W. H. Pierson, H. W. Anderson, J. O. Ross, P. F. Noll, J. W. Kurfees, G. O. Wagoner, J. E. Bennett, J. F. Manning.

WESTINGHOUSE ELECTRIC CORP.,
PITTSBURGH, PA. — (445-447)
EXHIBIT: Textile Motors and electrical
power equipment.
IN ATTEMPANCE: W. W. Ballew, J. W. Rigdon, C. C. Smith, A. R. Hoke, F. T.

WESTINGHOUSE LAMP DIV

FESTINGHOUSE LAMP DIV., BLOOMFIELD, N. J. — (444)
EXHIBIT: Fluorescent and incandescent lighting equipment.
IN ATTENDANCE: R. A. CORVEY, W. R. Mc-Kinney, J. D. Mitchell, J. W. Johnston, G. A. Bismarck.

WEST POINT FOUNDRY & MACHINE CO.,
WEST POINT, GA. — (813-814)
EXHIBIT: Their Model 55 Air-Dri Slasher
and Multi-Cylinder Slasher; Griffin Size
Applicator; their standard Double-Squeez
Size Box; a new Slasher Head End; separate automatic three-stage friction Beam
Drive, applicable to older slasher head
ends:

N ATTENDANCE: R. L. Mundhenk, R. V. Lee, C. G. Holt, J. H. McGee.

WESTON ELECTRICAL INSTRUMENT CORP.,

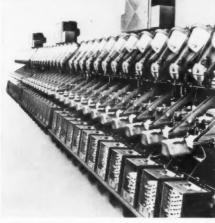
NEWARK, N. J. — (511)
EXHBERT: Electrical Measuring, Recording and Controlling Instruments.
IN ATTENDANCE: L. Van Blerkom, J. W. Devine, Russell Ranson, Grier Wallace, Jr.

WHITE AND COMPANY, CHARLOTTE, N. C. — (502) (See—Parks-Cramer Co.)

WHITIN MACHINE WORKS,
WHITINSVILLE, MASS. — (818-820)
EXHIBIT: Even-Draft Drawing Frame: Monarch Sliver to Yarn Spinning Frame; Novelty Yarn Twister and accessories; Fill-Master Winder and accessories; Spinning Frame with complete change-over assembly; Unitrol Weighting. Also display of repair and replacement parts.

IN ATTENDANCE: R. G. McKaig, R. W. Rawlinson, R. F. Waters, C. M. Banks, B. C. Grieb, J. H. Bolton, Harry Moss, J. H. Bolton, Jr., E. K. Swift, Jr., R. J. McConnell.

For Floor Plan of Exhibition see page 88



Whitin Fill-Master Filling Bobbin Winder

WHITINSVILLE SPINNING RING CO., WHITINSVILLE, MASS.— (208) Ехишит: Spinning and Twister Rings, Holders and related accessories. In Attendance: W. P. Dutemple, G. T. Brown, W. K. Shirley, H. M. Jackson.

WILKERSON CORP., ENGLEWOOD, COL. — (311-312)

WINSOR & JERAULD MFG. CO., CHARLOTTE, N. C. — (337) EXMIBIT: Tenter Clips and Chains; high speed conveyor type Openers. IN ATTENDANCE: Matthew Zuck, Edward Wharmby, A. J. Cole, R. E. Laycock.

SONS CO.,

OOD'S T. B. SONS CO., CHAMBERSBURG, PA. — (237) EXHIBIT: New Card Drive; variable speed Spinning Drive; ball bearing Seals and other power transmission equipment. IN ATTENDANCE: C. O. Wood, R. C. Reese, E. L. Nuernberger, E. R. Kleinlein, Joe Seawell, G. H. Henderson.

WRENN BROS.,
CHARLOTTE, N. C. — (825)
EXHIBIT: Hyster Fork Lift Trucks; Colson
Casters, Floor Trucks and Lifters.
IN ATTEMPORANCE: G. L. Wrenn, P. E. Wrenn,
J. P. Wrenn, Tom Bromeling, E. F. Cail,
Dan Dougherty, Bill Hoy, Frank Lilly,
Herman Pfeifer, Jim Reutt, Dick Ward.

YALE & TOWNE MFG. CO., PHILADELPHIA, PA. — (823) EXHIBIT: Trucks and Hoists for the textile industry.

industry.

In Attendance: N. C. Baker, P. R. Minich,
J. H. Brown, C. Rooney, F. Rau, J. P.
Coleman, E. A. Brigham, E. C. Campbell,
F. Harris, M. R. Hawley.

YEOMANS TEXTILE MACHINERY CO., SPARTANBURG, S. C. — (ANNEX #6)

ZINSER, CHARLOTTE, N. C. — (130) (See Watson & Desmond

### High Speed Jet Dryer

James Hunter Machine Co. is offering a new type jet single pass tenter dryer, the Uniflow, for spun synthetics, blends, woolen and worsted fabrics. The Uniflow utilizes high velocity air impinging on the cloth from the closest possible proximity. Regular production is reported to demonstrate that cloth is dried with uniformity across the face. No additional control attachment is necessary to maintain the



same uniformity of dryness in the selvages. Company officials claim the dryer is unusually compact and accessible, and has a unique fan and heater chamber.

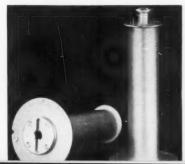
### Stehedco Drop Wires

Steel Heddle Mfg. Co. has introduced Stehedco galvanized drop wires which are guaranteed to be as effective with electrical stop motions as copper drop wires. Stehedco claims its galvanized drop wires will resist rust much longer than drop wires with a standard copper finish.

#### Ring Twister Bobbin

Cloverleaf-Freeland Corp. has developed a new all-metal ring twister bobbin which can be used

in all newer processes calling for extremely high temperatures. An aluminum tube running through the center acts as full-length spindle bearing while the driving plate at the bottom is replaceable. The bobbin is reported to have operated extremely well at accelerated speeds-15,000 RPMs on an upstroke twister and better than 8,000 RPMs on a ring twister.





### The Pueblo Indians

were an ingenious people. With their lives at stake, they devised a strong, lasting protection against the marauding Navajo and Apache tribes. The resultant fortress-type homes upon the summits of inaccessible mesas proved to be so well built that even today ancestors of these cliff-dwellers are able to utilize the original dwellings constructed many centuries ago.

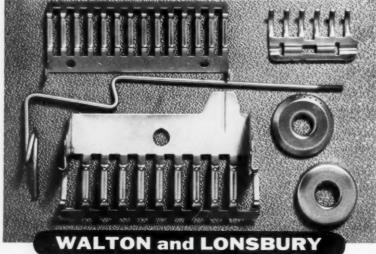
he value of good workmanship and quality materials cannot be overestimated. Let us show you how WALHARD HARD CHROMIUM PLATING will give your parts longer-lasting protection and save you money in maintenance and down-time costs.

If you are buying chromium plating, you are paying for both quality and service regardless of what you are getting. Then why not have the very best — try WALHARD on your next hard chromium plating order.

Be sure you are getting quality . . . it costs no more and lasts longer.

The leading name in textile hard chromium plating

Walhard



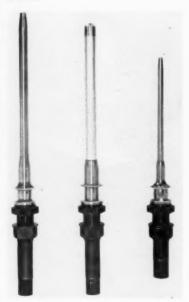
79 NORTH AVENUE - ATTLEBORO, MASSACHUSETTS

### **New Machinery**

### **New Equipment**

### Spindles Produced in South

Anti-friction spindles are now in production at the Sandford, N. C. plant of Roberts Co., according to Robert E. Pomeranz, president, who states that these spindles are the first of their type produced in the South.



Capacity of the new spindle manufacturing operation has been set at 20,000 a month and orders have already been received for 125,000 spindles, Mr. Pomeranz said. Roberts is manufacturing three types: for filling quills, wood warp bobbins and paper tubes.

Among the advantages claimed for its spindles by Roberts are: precision ball bearings in an all-steel base for higher speeds and larger packages; almost complete elimination of oiling; smaller whorl diameters which afford considerable reduction in cylinder speeds permitting reduced horsepower consumption and extending life of cylinders, cylinder bearings and tape tension pulleys.

### Collecto-Vac Announced

The Bahnson Collecto-Vac, a new product in the vacuum collection field, has been announced by The Bahnson Co. This new development for collecting lint, fly and broken ends, is reported to increase spinner efficiency, effect production savings, reduce fiber waste, and provide cleaner conditions. The company has pioneered for over 40 years in air handling and air conditioning design and manufacture for the textile industry.

### Circular Knitting Machine

Textile Machine Works is now operating experimental models of their "Reading CK-A" circular knitting machine, developed by their subsidiary, Keller Machine Co., Athens, Ga. The company will produce a trial lot of 168 and 84-needle machine which will be placed in several domestic mills for field testing.

The 168-needle Reading CK-A machine is said to produce over 3 dozen pairs of 4-diamond argyles in an eight hour shift using 100's 2 ply Helanca yarn and a rubber rib top. The machine itself is built around a vertical jack cylinder which makes it possible to select pattern jacks from pattern cylinders at five levels. As many as 16 pattern drums could conceivably be used for pattern selection but only eight drums have been used to date.

### **New High Strength Bobbin**

A new bobbin, introduced by the Steel Heddle Manufacturing Co., is said by the manufacturer to be outstanding in strength and provide surfaces which afford excellent protection for continuous filament yarns.

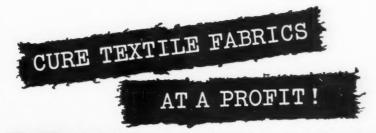
Tradenamed "Gyrotex," the bobbin achieves its strength by the use of high-strength structural aluminum in the core and quality phenolics on the surface. Other properties of the bobbin, according to the manufacturer, are perfect concentricity with the spindle; rigid construction that prevents trapping; ability to take steaming.

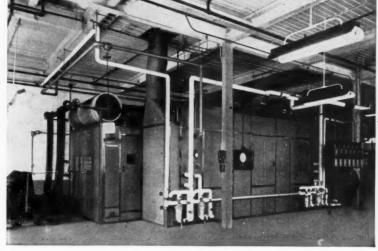
#### **Loom Cleaner**

American Moistening Co. has introduced its Heliclone loom cleaner which uses helically spinning jets of high velocity air to blow away



lint, fly and dirt. The Heliclone uses rapidly whirling outlet nozzles, driven by the air stream, to direct the air jets in a series of overlapping circular patterns which produce a rapid series of bursts of cleaning action each time the cleaner passes over the looms on a timed cycle. A new type of ceiling track suspension carries the cleaner along the lines of looms and eliminates need for supporting posts or attachments to the frames of the looms.





Installation view of Proctor Loop Curer

- **★** Greatest Curing Uniformity
- \* Improved Design
- ★ Maximum Capacity with Minimum Power Requirements
- \* Flexibility of Operation
- \* Simplified Installation



#### LOOP CURER and ROLLER CURER

These rugged, high-capacity machines feature the latest design and construction improvements—all geared to increase your profits. Units can be combined with existing equipment to meet your exact requirements. For fabrics that will not handle properly in loop, the roller curer is recommended. Recent developments for this machine also include improved air distribution, flexibility in holding capacity, and no-stretch operation. These machines are the result of long experience in supplying machinery to the textile industry. For the complete story of the profit-making opportunities offered by Proctor, write today for latest information bulletins.

#### WRITE FOR DETAILS. PROCTOR & SCHWARTZ EQUIPMENT FOR THE TEXTILE FIELD

AUTOMATIC BLENDING SYSTEMS • WEIGHING FEEDS • PICKERS • SHREDDERS • BALE BREAKERS • SYNTHETIC CARDS • GARNETTS • DRYERS FOR FIBROUS MATERIAL • YARN DRYERS • HOT AIR SLASHER DRYERS • CLOTH CARRONIZERS • ROLLER DRYERS AND CURERS • LOOP AGERS FOR PRINT GOODS • TENTER HOUSINGS • OPEN-WIDTH BLEACH SYSTEMS FOR WOVEN FABRICS • MULTIPASS AIRLAY DRYERS • NYLON SETTING EQUIPMENT • CON-O-MATIC WASHERS • CONTINUOUS BLEACH SYSTEMS FOR PRODUCING TUBULAR KNITS • EQUIPMENT FOR • QEDMANIZED\* % SHRUNK-TO-FIT FABRICS • CARPET DRYERS



### PROCTOR & SCHWARTZ, INC.

Philadelphia 20, Pa.

Manufacturers of Textile Machinery & Industrial Drying Equipment

### **Gas Fading Chamber**

The gas fading chamber, originally developed by the United States Testing Co., in cooperation with the AATCC Committee on Atmospheric Gas Fading, for evaluation of atmospheric gas reactions on dyed textiles, is now being manufactured for direct sale to industry.

The instrument is made in two models, the drum type, which conforms to specifications of the American Society for Testing Materials (D 682-52), the Ameri-

can Standards Association (L-14 and L-22), and the American Association of Textile Chemists & Colorists; and the more compact squirrel cage model which meets requirements of the last two.

With the widespread occurrence of product deterioration by atmospheric gases and the limited success in meeting it, a variety of industries, the company reports, are utilizing the gas fading chamber for testing resistance of dyes and pigments efficacy of inhibitor substances, and the susceptibility to

gas absorption of specific materials.



### **New British Beater**

Tweedales & Smalley, Ltd. and the British Cotton Industry Research Association have announced the Shirley beater compartment. The beater, an arrangement of baffle, beater and cover for application to a scutcher, is said to give more intimate blending and superior lap formation to both natural and synthetic fibers.

In operation the beater rotates at 950 r.p.m. As a result of this speed and of the fine teeth on the beater, the material is combed from the feed in small tufts. Strong air currents are set up by the beater, but the baffle beyond the beater prevents excessive movement and allows air drawn in under the beater to flow directly to the cages.

The Shirley beater is said to be suitable for use with almost all types of cotton and synthetic fibers up to 1½" staple. It is recommended for blending two or more different fibers or fibers of a different color.



### Gaston County

### COMBINATION BEAM AND PACKAGE DYEING MACHINES

More and more mills are turning to Gaston County Combination Beam and Package Dyeing Machines as the most logical solution to a variety of dyeing problems.

Their maximum flexibility, rugged construction, and fully automatic controls are <u>built-in</u> features that mean operation at the highest performance level.

Take the short-cut to longer dyeing profits—consult a Gaston County engineer today, or write for illustrated literature.

### **GASTON COUNTY**

Pioneers in Automatically

### STANLEY

Gaston County Dyeing Machine Co. Terminal Building, 68 Hudson St. Hoboken, N. J., G. Lindner, Mgr.



### DYEING MACHINE CO.

Controlled Dyeing Machinery

### NORTH CAROLINA

The Rudel Machinery Co., Ltd. 614 St. James St. W., Montreal 137 Wellington St. W., Toronto



### Improved Colorimeter

Manufacturers Engineering & Equipment Corp., has announced a colormaster differential colorimeter, Model IV, which is said to accurately make color measurements with a senstitivity to color differences exceeding that of the human eye. According to the company, it measures the color transmission and reflectance of such subtances as synthetic fibers, paints, liquid solutions, pigments, and slurries within 0.0001 reflectance units.

For further information write the editors



#### New York Fashion Event in Fall

Fashion-O-Rama, the world's first exposition devoted exclusively to the fashion industries, will be a virtual "world's fair of fashion" in which every phase of the women's, men's and children's fashion industry will participate. The exposition will be staged in the New York Coliseum Oct. 27-Nov. 4.

#### **New Fletcher Showroom**

A new "retail type" showroom for its products was opened recently in Philadelphia by The Fletcher Works, builders of narrow fabric looms, centrifugals and throwing equipment. The new showroom is located at the company's factory at 2nd and Glenwood Avenues. The showroom will permit sales engineers to demonstrate Fletcher equipment to prospects under actual working conditions.

#### **New American Rieter Plant**

The American Rieter Co., Inc., Arlington, N. J., has begun construction of a new plant in West Caldwell, N. J. The company states that completion of the new building will enable it to improve its maintenance and spare parts service to its customers. In addition, the building will include a show room to display the firm's Swiss textile machinery in operation. Plans call for transfer of offices and stocks of spare and repair parts to the new building this Fall.

#### New Draper parts catalog

A new improved repair parts catalog is now available for Draper E, K, and Modified D looms. Bound in sturdy flexible fabricoid covers, the catalog is a loose leaf book to which new pages may be added. The catalog is illustrated with frequent drawings showing the function and location of all the repair parts on the Draper loom. Customers and other persons interested in obtaining copies should write to the Draper Corp., Hopedale, Mass. Draper also maintains offices in Atlanta, Ga.; Greensboro, N. C.; and Spartanburg, S. C.

#### New Diehl Office

Diehl Manufacturing Co., electrical division of Singer Manufacturing Co. at Somerville, N. J., has opened a new Southern district office and warehouse in the Singer Building, 4951 Peachtree Industrial Blvd., Chamblee, Ga. The office, formerly located in Atlanta, Ga., is under the management of Edwin F. Graham.





prevent
product damage at
AVONDALE MILLS
by equalizing drafts
and pressures

Drafts or pressure conditions created by doors that remain open too long cause product damage, upsetting specified temperature and humidity requirements.

But not at the various Avondale Mills where 34 Stanley Magic Door Controls open doors on approach, keep them open the minimum of time required to let traffic through, then close them automatically. Above, is a Stanley Magic Eye Control in operation at the Avondale Mills' plant, Sylacauga, Alabama.

Your mill, too, will benefit through the installation of Stanley Magic Door Controls to operate swinging, sliding or folding doors:

- To control temperature and humidity.
- Save time by speeding up traffic flow
- Eliminate maintenance costs due to damaged doors
- Improve working conditions



MAGIC EYE (photoelectric) Actuates door when beam is broken.



#### PULL CORD

Door is operated only with pull of overhead hand cord.



#### PUSH PLATES

Wall-mounted push or kick plates. Adaptable to many industrial locations.

Write for free literature and to arrange a visit from the Stanley Representative.

#### MAGIC DOOR DIVISION, THE STANLEY WORKS

DEPT. H, 1092 LAKE ST., NEW BRITAIN, CONN.

Representatives in Principal Cities
STANLEY TOOLS • STANLEY HARDWARE • STANLEY ELECTRIC TOOLS • STANLEY STEEL STRAPPING • STANLEY STEEL

#### Open Georgia Felt Mill

F. C. Huyck & Sons, Rensselaer, N. Y., has begun operations at its modern felt mill at Aliceville, Ala. The mill, with 200,000 square feet of work space, is said to be twice as large as any felt mill in the South. It will produce Huyck felts and compressive shrinkage blankets for the paper and textile industries.

#### Lumar Corp. Formed

Formation of a new chemical company, the Lumar Corp. with offices and plant at 217 Mill St., Cleveland, Tenn., has been announced by William F. Luther, president. Other officers are T. J. Marler, vice president and treasurer, and Jac Chambliss, secretary. Lumar will manufacture a number of specialized chemical products for use by the textile, paper and other industries.

#### **Nylon Tricot Bulletin**

A technical bulletin released by Du Pont's Textile Fibers Department reports properly made nylon tricot fabric can be stabilized to give combined warp and filling shrinkages in the low range of one per cent. The bulletin reports satisfactory dimensional stability can be obtained if the fabric is heat set at realistic finishing dimensions.

#### **New Arnel Bulletins**

Latest information on the processing, carding, drawing, roving, spinning, plying, winding and coning of Arnel and Arnel blended yarns is contained in technical bulletin TD-14A, recently prepared by Celanese Corp. Also available is technical bulletin TD-13A, which contains 10 new formulas for slashing Arnel, bringing the total available to 16. Copies of both bulletins can be obtained by writing to the editors.

#### Chilean Acetate Plant

Celatino, S.A., foreign subsidiary of Celanese Corp. of America, has received approval to build a multimillion dollar acetate yarn plant near Valparaiso, Chile. The plant, first of its kind to be established in Chile, will be operated by another Celanese affiliate, the newly-organized Celanese Chilena, S.A. The plant is expected to be operating within the next 18 months, with an initial capacity of 3,000,000 pounds.

#### New Dye Service Firm

United Piece Dye Works Service Corp., jointly owned by United Piece Dye Works, New York City, and Sam Fire, has been formed to service customers at Lodi and Paterson, N. J., Charleston, S. C., and York, Pa.

#### Nash Buys Dyken

J. M. Nash Co., Inc., Milwaukee, Wis., has purchased Dyken Manufacturing Co., West Bend, Wis., producer of rolling machines. Nash manufactures special machinery for the textile industry. Operations at Dyken will be continued as a wholly-owned subsidiary of Nash.

#### Song Revue Planned

Science and show business join forces in "Cavalcade of Color," a song-and-dance revue to be presented at 4 p.m., Thursday, September 13, at Perkin Centennial headquarters, the Waldorf-Astoria Hotel, New York City. Produced with professional stage talent by Good Housekeeping and the National Retail Dry Goods Association, the musical show will depict the evolution of dyes in the history of costumes.

#### **Enka Plant Changes**

American Enka Corp. has reorganized technical and production functions at its Enka, N. C., plant on a two-operation basis, rayon and nylon, according to E. M. Salley, Jr., plant manager. Dr. W. J. D. Van Dobbenburgh has been appointed rayon operation manager and Paul W. Markwood nylon operation manager.

#### **Uster Names Sales Agent**

Uster Corp., Charlotte, N. C., has named Heller-Rochester Corp., Rochester, N. Y., as sales representatives for the Mark-Fix 3 cloth tagging device in the Illinois, Ohio and New York areas.

#### Personnel Notes

National Aniline Division of Allied Chemical & Dye Corp. has promoted C. L. Martin to superintendent of services, Robert L. Axtell, superintendent of production, L. W. Jarrett supervisor of personnel and safety, and Harvey A. Hammond to general foreman at the Moundsville, W. Va., plant.

Solvay Process Division, Allied Chemical & Dye Corp., has announced the following appointments: John C. MacLeod, assistant director of operations; Bennett D. Buckles, assistant to the vice president; H. W. McNulty, technical assistant to the manager of the organic chemicals section, and T. W. Reed technical assistant to the director of product development.

Walter L. Hudson has been named Southern sales manager of the Victor Ring Traveler Co.

Dr. Helmut Wakeham, has been granted a two-year leave of absence as director of research, Textile Research Institute, Princeton, N. J., to assume the post of director of the Ahmedabad Textile Industry Research Association, Ahmedabad, India.

# NOW A "COMPLETE PACKAGE"

THE MODERN WAY TO BUY
THROWN, NATURAL OR DYED
FILAMENT YARNS

RAYON . NYLON . DACRON . ORLON

Modern standards of production efficiency and quality demand modern methods. The "complete package" — a perfectly thrown, natural or dyed package of filament yarn — prepared to your custom requirements by experts may be the ideal solution to your yarn problems.

As specialists in the exacting job of dyeing and throwing modern yarns since 1922, Hoffner is the logical choice for "complete package" service.

Why not consult us about this new way of streamlining your production and improving quality?



REPRESENTATIVES Shannonhouse & Wetzell, Johnston Building, Charlotte 2, N. C.

Howard L. Cromwell has been appointed plant manager of Stauffer Chemical Company's Freeport, Texas, operation.

C. H. Masland & Sons has appointed Frank E. Masland III as general manager; Daniel L. Masland, director of the Spinning Division, Wakefield, R. I., and John J. Higgins assistant division manager for the Western Division.

Dr. Paul B. Stam has joined Burlington Industries as area research director of a program primarily concerned with cotton fiber.



Charles W. White

Charles W. White has been named director of sales for Sonoco Products Co.

E. Wm. Eipper has been appointed director of the market development department for Stauffer Chemical Co.

Thomas M. Smithwick has been named export manager of American Viscose Corp., and Stanley H. Rose has joined the corporation in an executive capacity.

A. Carl Martin, Jr., has been appointed staple products sales manager for Celanese Corp. of America, and Dr. William L. Evers has been named assistant manager of fiber research.



John M. Terpay

John M. Terpay has been appointed to the sales staff of the nylon staple division of Industrial Rayon Corp.

Claude Ramsey, Jr., has been appointed production manager of the American Enka Corporation's rayon staple fiber plant under construction at Lowland, Tenn.

Leonard G. Tubbs has been designated general sales manager of Arnold, Hoffman & Co.



Howard B. Carlisle, Jr., Lyman Mills, Inc., has been elected president of the South Carolina Textile Manufacturers Association.

Robert S. Argyle has been named manager of advertising for Dow Corning Corp., succeeding Louis S. Putnam who will now serve Dow Corning as an editorial and publicity consultant.

John E. Watte, Jr., has been elected president of Catalina, Inc., succeeding A. Louis Oresman, who became chairman of the board.

R. Houston Hale has been appointed manager of the New England district sales office of The Chemstrand Corp. John P. Dougherty has become senior sales specialist in the New York office. Ed-(Continued on Page 113)

# PROTECTS GOODS and MACHINES

NON-FLUID OIL does what ordinary oils cannot do-it stays in the bearings, off the goods, and eliminates "seconds." Oil-damaged goods are costly . . . but you can do something about it now.

NON-FLUID OIL is drip-proof, leak-proof and spatter-proof providing constant protection against machine wear. NON-FLUID OIL stays where it belongs—on the working surfaces—lubricating until it is entirely consumed.

Write for informative bulletin and a free, on the job, testing sample of NON-FLUID OIL.

Look us up at Booth 109 Southern Textile Exposition.

#### NEW YORK & NEW JERSEY LUBRICANT COMPANY

292 MADISON AVE., NEW YORK 17, N. Y.

WORKS: NEWARK, N. J. So. Dist. Mgr.: Lewis W. Thomason, Jr. Charlotte, N.C. WAREHOUSES Birmingham, Ala. Greenville, S. C. Atlanta, Ga.

Chicago, III. Columbus, Ga. Charlotte, N. C. Springfield, Mass

Greenshorn, N. C. Detroit, Mich. Providence, R. I. St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

# U. S. MAN-MADE FIBER PRICES

This schedule lists the prices of yarns, staple and tow as reported by the producers in August, 1956. All prices are given as subject to change without notice.

#### RAYON FILAMENT YARN

#### American Bemberg

**Current Prices** 

Effective February 15, 1956

#### Regular Production Reel Spun Yarn

| Den/Fil  | No<br>Twist<br>Skeins | Twisted* Skeins & Cones | 8½<br>Turns | High Tw<br>12 e<br>Turns | ist Skeins<br>r 15<br>Turns | & Cones<br>18<br>Turns |
|----------|-----------------------|-------------------------|-------------|--------------------------|-----------------------------|------------------------|
| 40/30    | \$1.49                | \$1.95                  |             |                          | ****                        | \$2.08                 |
| 50/36    | 1.24                  | 1.50                    | ****        |                          | ****                        | 1.72                   |
| 65/45    | 1.14                  | 1.30                    |             | \$1.53                   | ****                        | 1.58                   |
| 75/60**  | 1.04                  | 1.18                    | ****        | 1.41                     | \$1.41                      | 1.49                   |
| 100/74** | .95                   | 1.08                    |             | 1.33                     | 1.33                        | 1.44                   |
| 125/60   | .94                   | 1.05                    | \$1.09      |                          |                             |                        |
| 150/120  | .93                   | 1.02                    | 1.12        | 1.27                     |                             | ****                   |
| 300/225  |                       | .95                     | ****        |                          | 1.08                        |                        |

Twisted includes twists up to 6 turns on 40 and 50 denier, and up to 5 turns on heavier deniers.
 Spun Dyed Black 15¢ per lb. extra.

#### "44" HH Spool Spun Yarn

| Den/Fil   | No<br>Twist<br>Tubes | No<br>Twist<br>Beams | 5<br>Turn<br>Beams | 5<br>Turn<br>Cones | 12<br>Turn<br>Beams | Turn<br>Skeins<br>&<br>Cones | Turn<br>Skeins<br>&<br>Cones |
|-----------|----------------------|----------------------|--------------------|--------------------|---------------------|------------------------------|------------------------------|
| 40/30     | \$1.35               | \$1.35               |                    |                    |                     |                              |                              |
| 50/36     | 1.00                 | 1.00                 |                    |                    |                     |                              |                              |
| 65/45     | 1.05                 |                      |                    |                    |                     | \$1.42                       |                              |
| 75/45**   | .97                  | .97                  | \$1.08             | \$1.08             | \$1.31              | 1.31                         | \$1.39                       |
| 75/54     | .97                  | .97                  | 1.08               | 1.08               |                     |                              |                              |
| 100/60**  | .89                  | .89                  | 1.03               | 1.03               | 1.23                | 1.23                         | 1.23                         |
| 125/60    | .84                  | .84                  | .99                | .99                |                     |                              |                              |
| 150/90*** | .77                  | .77                  | .81                | .81                | 2222                | 1.15                         | 1.15                         |
| 150/120   | .81                  |                      |                    | .93                |                     |                              |                              |

\*\* Bemberg Solution Dyed yarns are spun in 75/45 and 100/60 only. Black 15¢ per lb. extra; all other colors 35¢ per lb. extra.
\*\*\* Spun Dyed Black 15¢ per lb. extra.

#### Nub-Lite (Short Nubbi)

| Code    | Den/Fil | 2½ Twist<br>Cones | 5 Twist<br>Cones |
|---------|---------|-------------------|------------------|
| 1516    | 150/90  |                   | \$1.35           |
| 1517*   | 150/90  |                   | 1.35             |
| 2000    | 200/120 |                   | .96              |
| 2025 ** | 200/120 |                   | .96              |
| 3000    | 300/180 | \$1.00            |                  |
| 4000    | 400/224 | 1.00              | ****             |
| 6000    | 600/360 | .98               |                  |
| 8000    | 800/450 | .98               |                  |

\* Code 1517 can be run in warp or filling.

\*\* Code 2025-Softer than 2000.

Terms: Net 30 days, f.o.b. shipping point. Minimum freight allowed to consignee's nearest freight station east of the Mississippi River. To points west of the Mississippi River minimum freight allowed to Memphis, Tennessee. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold f.o.b. delivery point.

#### American Enka Corp.

Current Prices

Standard Quality Yarns

#### Standard Quality Rayon Yarns

| A. Natura | al:    |                              |         |       |       |      |       |       |  |
|-----------|--------|------------------------------|---------|-------|-------|------|-------|-------|--|
|           |        |                              |         |       |       | Ske  | ins   |       |  |
| Den/Fill. | Luster | Turns                        | Weaving | Cones | Beams | Long | Short | Cakes | 3 Lb.<br>Knotless<br>Cakes<br>Knitting |
| 50/18     | E      | 5<br>3<br>4<br>4<br>8<br>2.5 | S       |       |       |      |       |       | 1.51                                   |
| 75/10     | В      | 3                            | S&Z     |       |       |      |       | 1.03  |  |
| 75/18     | E      | 4                            | S       |       |       |      |       |       | 1.17                                   |
| 75/30     | B      | 4                            | S&Z     | 1.12  | 1.12  |      |       | 1.03  | 1.12                                   |
| 75/30     | B      | 8                            | S       | 1.17  |       |      | 1.32  |       | 1.17                                   |
| 75/45     | P.E    | 2.5                          |         |       |       |      |       |       |  |
|           |        | 4.                           | 5S&Z    | 1.12  | 1.12  | 1.18 |       | 1.03  | 1.12                                   |
| 75/60     | P      |                              | Z       | 1.17  |       |      |       | 2100  |  |
| 100/14    | В      | 3                            | S&Z     |       |       |      |       | .91   |  |
| 100/40    | B.E    | 3<br>3<br>12                 | S       |       |       |      |       | .01   | 1.22                                   |
|           |        |                              |         |       |       |      |       |       |  |

| 100/40       | B.P.E | 4.5  | S&Z  |      |      |      |      | .91 |     | .99 |
|--------------|-------|------|------|------|------|------|------|-----|-----|-----|
| 100/40.60    | B.P   | 2.5  | S&Z  | .99  | .99  | 1.03 | 1.07 | .91 |     | .99 |
| 100/60       | E     | 2.5  | S    | 1.01 | 1.01 |      |      | .93 |     |     |
| 125/40       | E     | 3    | Z    |      |      |      |      |     |     | .91 |
| 150/40       | B.P.E | 2.1. | 35&Z | .86  | .86  | .89  | .94  | .81 | .81 | .85 |
| 150/40       | B.E   | 5    | S    | .86  |      | .89  | .94  |     |     |     |
| 150/40       | B.E   | 8    | S&Z  | .92  |      | .95  | 1.00 |     |     |     |
| 150/90       | B.E   | 2.1  | S&Z  | .87  | .87  |      |      | .82 |     |     |
| 200/40       | P     | 3    | Z    |      |      |      |      |     |     | .79 |
| 250/60       | P.E   | 2.4  | Z    |      |      |      |      |     |     | .72 |
| 300/50       | B.E   | 3    | S    | .70  | .70  |      |      |     |     |     |
| 300/60       | B.P.E | 2.1  | S& Z | .70  | .70  |      | .73  | .68 | .68 | .70 |
| 300/60       | В     | 3.5  | S    | .70  | .70  |      |      | .68 |     |     |
| 300/60       | В     | 4.3  | S    | .73  | .73  |      |      | .71 |     |     |
| 300/60       | В     | 7    | S    | .80  |      |      |      |     |     |     |
| 300/40.      |       | 2.5, | _    |      |      |      |      |     |     |     |
| 120 H.T.     | В     | 3.   |      | .72  | .72  |      |      |     |     |     |
| 450/80       | B     | 3    | S    | .67  | .67  |      |      | .65 | .65 |     |
| 600/80,120   | B.E   | 3    | S    | .66  | .66  |      |      | .64 | .64 |     |
| 900/120      | В     | 3.4  | S    | .65  |      |      |      | .63 | .63 |     |
| 900/120 H.T. | В     | 3.6  | S    | .67  |      |      |      | .65 | .65 |     |
|              | -     |      | -    |      | _    | _    |      |     |     |     |

B-Briglo, P-Periglo (semi-dull), E-Englo (dull), H.T.-High Tenacity. B. Tinted Yarns: 5¢ additional per lb.

#### "Jetspun" Colored Yarns

|          |          |       | Weav  | -     |       |        |
|----------|----------|-------|-------|-------|-------|--------|
| Den/Fil. | Tenacity | Turns | Cones | Beams | Cakes | Colors |
| 100/40   | Regular  | 2.5S  | 1.34  | 1.34  |       | All    |
| 100/60   | Regular  | 4 S&Z |       |       | 1.26  | All    |
| 150/40   | Regular  | 2.15  | 1.21  | 1.21  |       | All    |
| 300/40   | Regular  | 3.45  | 1.05  |       |       | All    |
| 450/80   | Regular  | 3.08  | 1.02  |       |       | All    |
| 600/80   | Regular  | 3.45  | 1.01  |       |       | All    |
| 900/120  | Regular  | 3.45  | 1.00  |       |       | All    |
| 300/40   | High     | 3.45  | 1.07  |       |       | All    |
| 600/80   | High     | 3.45  | 1.03  |       |       | All    |
| 900/120  | High     | 3.45  | 1.02  | 1.02  |       | All    |

Terms: Net 30 days F.O.B. Enka, North Carolina or Lowland, Tennessee. Minimum common carrier transportation charges prepaid to first destination on or east of the Mississippi River.

#### American Viscose Corp.

Effective January 23, 1956

#### Graded Yarns

|      |               | (        | graded 1    | urris           |                |                |        |
|------|---------------|----------|-------------|-----------------|----------------|----------------|--------|
| Der  |               | Т        | rpe         | Short<br>Skeins | Long<br>Skeins | Beams<br>Tubes | Cakes  |
| 50   | 20            | Bright . | & Dull      | 8               | \$1.54         | \$1.51         | \$1.40 |
| 60   | 10            | Bright   |             |                 |                | 1.36           | 1.25   |
| 75   | 10-30         | Bright   |             | 1.19            | 1.15           | 1.12           | 1.03   |
| 75   | 30            | Dull     |             |                 |                | 1.12           | 1.03   |
| 100  | 14-40         | Bright   |             | 1.07            | 1.02           | .99            | .91    |
| 100  | 60            | Dull     |             |                 |                | 1.01           | .93    |
| 150  | 24-40-60      | Bright   | & Semi-Dull | .94             | .89            | .86            | .81    |
| 150  | 40            | Dull     |             |                 |                | .86            | .81    |
| 150  | 90            | Dull     |             |                 |                | .87            | .82    |
| 200  | 10-44         | Bright   |             | .87             | .82            | .79            | .75    |
| 250  | 60            | Semi-D   | ull & Dull  | .79             | .75            | .72            | .70    |
| 300  | 44            | Bright a | & Dull      | .76             | .73            | .70            | .68    |
| 300  | 234           | Dull     |             |                 |                | .72            | .70    |
| 450  | 100           | Bright   |             |                 | .69            | .67            | .65    |
| 600  | 100           | Bright   |             |                 | .68            | .66            | .64    |
| 900  | 50-60-100-150 |          |             |                 | .67            | .65            | .63    |
| 1200 | 75            | Bright   |             |                 | .64            | .62            |        |
| 2700 | 150           | Bright   |             |                 | .67            | .65            |        |
|      |               | Extr     | a Turns F   | er Inc          | ch             |                |        |
| 75   | 30            | Bright   | 6-Turns     | \$1.31          | \$1.27         | \$1.24         | \$     |
| 100  | 40            | Bright   | 6-Turns     | 1.19            | 1.14           | 1.11           | 1.03   |
| 150  | 40            | Bright   | 6-Turns     | 1.04            | .99            | .96            | .91    |
| 300  | 15            | Bright   | 5-Turns     |                 |                | .75            |        |
| 300  | 44            | Bright   | 6-Turns     |                 | .83            | .80            | .78    |
| 600  | 30            | Bright   | 5 Turns     |                 | .73            | .71            | .69    |
|      |               | F        | Rayflex Y   | arns            |                |                |        |
| 150  | 60            | Rayflex  | ,           |                 |                | s .89          | s .84  |
| 300  | 120           | Rayflex  |             | \$              | \$             | .72            | .70    |
| 450  | 120           | Rayflex  |             |                 |                | .69            | .67    |
| 600  | 234           | Rayflex  |             |                 |                | .68            | .66    |
| 900  | 350           | Rayflex  |             |                 | .69            | .67            | .65    |
| 900  | 330           | naynex   |             |                 | .09            | .01            | .00    |

#### Thick and Thin Yarns

| 150 | 40  | Bright & Dull | **** | 1.10 | **** |
|-----|-----|---------------|------|------|------|
| 150 | 90  | Bright & Dull |      | 1.10 |      |
| 200 | 75  | Bright & Dull |      | 1.02 |      |
| 300 | 120 | Bright & Dull |      | .92  |      |
| 450 | 100 | Bright & Dull |      | .89  |      |
| 490 | 120 | Bright & Dull |      | .92  | **** |
| 900 | 350 | Dull          |      | .97  | **** |
| 920 | 120 | Bright & Dull |      | .97  | **** |

#### Colorspun Yarns

Currently producing regular tenacity and high strength at premiums of \$.35 per pound.

(Continued from Page 111)

mund J. Gernt was promoted to section head of the development division's throwing, knitting and weaving section.

Norman Nuttall has rejoined Stein, Hall & Co., Inc., as manager of the Charlotte, N. C., sales branch.



T. E. Neesby

Torben E. Neesby has been appointed technical director of the Textile Chemical Department of E. F. Drew & Co., Inc., and Bert W. Ahrens has been named technical sales representative of the firm's Technical Products Division.



Amos Griffin

Amos Griffin has been appointed director of merchandising, textile division, Eastman Chemical Products, Inc.

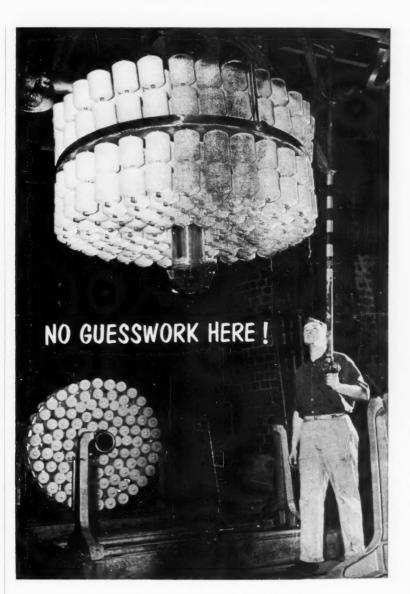


George R. McGrath

George R. McGrath has been appointed sales manager of Hartford Rayon Co., division of Bigelow-Sanford Carpet Co., Inc.

American Viscose Corp. has announced the following appointments: Norman A. Cocke, Jr., manager of rayon filament sales; J. Reid Durbin, manager of district sales office, Charlotte, N. C., and Malcolm V. Macfarlan, field sales manager.

(Continued on Page 115)



# 91 Years of Experience and Skill AT YOUR Service

To meet your every yarn dyeing need, Globe offers the best in technical skill, experience, and the most modern equipment

Globe does package dyeing on tubes, skein and warp dyeing and bleaching, warp mercerizing, and sizing. Yarns processed include cotton, rayon, worsted, nylon, linen, blend and novelty yarns. Also Acrilan—Dacron—Orlon.



91 Years of Service to The Textile Industry 1865 • 1956

4500 WORTH STREET, PHILADELPHIA 24, PA.

#### Viscose Filament Yarns

| ie | following deposit charges are made on invoice | es:           |
|----|---|---------------|
|    | Metal Section Beams                           | \$170.00 each |
|    | Wooden Section Beams                          | 55.00 each    |
|    | Wooden Section Beam Crates                    | 30.00 each    |
|    | Metal Section Beam Racks                      | 75.00 each    |
|    | Metal Tricot Spools-14" flange                | 30.00 each    |
|    | 21" flange                                    | 60.00 each    |
|    | 32" flange                                    | 150.00 each   |
|    | Metal Tricot Spool Racks-14" flange           | 135.00 each   |
|    | 21" flange                                    | 100.00 each   |
|    | 32" flange                                    |               |
|    | Wooden Tricot Spool Crates                    | 20.00 each    |

Cloth Cake Covers .05 each
Same to be credited upon return in good condition—freight collect.
Terms: Net 30 days.

#### Celanese Corp. of America

| Current Prices |               |  |
|----------------|---------------|--|
| Effective Janu | jary 24, 1956 |  |

Th

|                             |       |        |            | Shrunk    |
|-----------------------------|-------|--------|------------|-----------|
| Den. Fil. Twist             | Beams | Cones  | Cakes      | Tubes     |
| #49 and #14                 |       |        |            |           |
| Production                  |       |        |            |           |
| 75/30/3 Bright              |       | \$1.06 | \$.98      |           |
| 100/40/3 Bright             | \$.93 | .91    | .86        |           |
| 100/40/5 Bright             |       | .97    | .92        | ****      |
| 100/60/3 Bright             |       | .92    | .87        | ****      |
| 125/40/2Z Bright            | .89   | .87    |            |           |
| 150/40/3 Bright             | .84   | .80    | .75        | ****      |
| 150/40/2Z Bright            | .82   | 1000   |            | ****      |
| 150/40/5 Bright             | 4114  | .86    | .81        |           |
| 150/40/8 Bright             |       | .92    | .87        |           |
| 150/40/0 Bright (Non Shrunk | )     | .66    |            | ****      |
| 300/50/3 Bright             | .69   | .68    | .66        | ****      |
| 300/50/0 Bright (Non Shrunk |       | .60    |            | ****      |
| #20 Production              |       |        |            |           |
| 150/40/3 Bright             | .82   | .78    | .73        | 8.72      |
| 150/40/0 Bright (Non Shrunk |       | .66    |            |           |
| 150/40/2Z Bright            | .82   |        | 1111       | ****      |
| 300/50/3 Bright             | .69   | .68    | .66        |           |
| 300/50/0 Bright (Non Shrunk |       | .60    |            | ****      |
| #20 Production              |       | 100    |            |           |
| 100/40/3 Dull               |       | .91    | .86        |           |
| 100/60/2Z Dull              | .95   |        |            |           |
| 100/60/0 Dull               | 111-  | .88    |            |           |
| 100/60/5 Dull               | .99   | .97    | .92        |           |
| 150/40/3 Dull               | .82   | .78    | .73        | .72       |
| 150/40/0 Dull (Non Shrunk)  |       | .66    |            |           |
| 150/90/3 Dull               |       | .85    | .80        | ****      |
| 250/60/0 Dull (Non Shrunk)  |       | .64    |            |           |
| 250/60/3 Dull               |       | .72    |            | .67       |
| #52 Thick &                 |       |        |            | .01       |
| Thin Rayen                  |       |        |            |           |
| 150/60/3 Bright             |       | 1.10   |            |           |
| 450/120/3 Bright            |       | .89    |            |           |
| Terms: Net 30 days Prices   |       |        | inning poi | nt lowest |

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi

Prices subject to change without notice.
All previous prices withdrawn.
Note: Prices on unlisted items can be obtained upon request.

#### E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

**Current Prices** 

Effective with orders issued April 16, 1956

#### Bright and Dull

| Den. | Fil. | Turns/<br>Inch<br>Up to |                   | Cones,<br>Beams,<br>Tubes | Skeins | Cakes  |
|------|------|-------------------------|-------------------|---------------------------|--------|--------|
| 40   | 20   | 3                       | Textile "Cordura" | \$1.90                    | 1.90   | \$1.85 |
| 50   | 20   | 3                       | rextile Cordura   | 1.58                      | 1.58   | \$1.60 |
| 50   | 20   | 3                       | Textile "Cordura" | 1.60                      | 1.60   | 1.55   |
| 50   | 35   | 3                       | Textile "Cordura" | 1.65                      | 1.65   | 1.60   |
| 75   | 10   | 3                       | acame conduit     | 1.12                      | 1.15   | 1.03   |
| 75   | 15   | 3                       |                   | 1.12                      | 1.15   | 1.03   |
| 75   | 30   | 3                       |                   | 1.12                      | 1.15   | 1.03   |
| 100  | 15   | 3                       |                   | .99                       | 1.02   | .91    |
| 100  | 40   | 3                       |                   | .99                       | 1.02   | .91    |
| 100  | 60   | 3                       | Bright            | .99                       | 1.02   | .91    |
| 100  | 60   | 3                       | Dull              | 1.01                      | 1.04   | .93    |
| 125  | 50   | 3                       |                   | .91                       | .93    | .85    |
| 150  | 40   | 3                       |                   | .86                       | .87    | .81    |
| 150  | 60   | 3                       |                   | .86                       |        |        |
| 150  | 60   | 3                       | Textile "Cordura" | .87                       | .88    | .82    |
| 150  | 90   | 3                       | Dull              | .87                       | .88    | .82    |
| 150  | 100  | 3                       | Dull              | .87                       | .88    | .82    |
| 200  | 35   | 3                       |                   | .79                       | .81    | .75    |
| 300  | 20   | 3                       |                   | .70                       | .73    | .68    |
| 300  | 50   | 3.5                     |                   | .70                       | .73    | .68    |
| 300  | 120  | 3                       | Textile "Cordura" | .71                       | .74    | .69    |
| 450  | 72   | 3                       |                   | .67                       | .69    | .65    |
| 600  | 96   | 3                       |                   | .66                       | .68    | .64    |
| 600  | 240  | 3                       | Textile "Cordura" | .67                       | .69    | .65    |
| 900  | 50   | 3                       |                   | .65                       | .67    | .63    |
| 900  | 144  | 3                       |                   | .65                       | .67    | .63    |
| 1165 | 480  | 3                       | Textile "Cordura" | .65                       | .65    | .62    |
| 1800 | 100  | 3                       |                   | .65                       |        |        |
| 2700 | 150  | 3                       |                   | .65                       | .67    |        |
| 5400 | 300  | 3                       |                   | .72                       |        |        |
|      |      |                         | Thick and Thi     |                           |        |        |
| 100  | 40   | 3                       | #7                | 1.38                      |        | 1.38   |
| 150  | 90   | 3                       | #7                | 1.10                      | 1.11   | 1.10   |
| 150  | 90   | 3                       | #19               | 1.10                      | 1.11   | 1.10   |
| 200  | 80   | 3                       | #7                | 1.02                      | 1.03   | 1.02   |
| 200  | 90   | 3                       | #19               | 1.02                      | 1.03   | 1.02   |
| 450  | 100  | 3                       | #7                | .89                       | .90    | .89    |
| 1100 | 240  | 3                       | #50               | 1.32                      |        | 1.32   |
| 2200 | 480  | 3                       | #50               | 1.14                      |        | 1.14   |
|      |      |                         |                   |                           |        |        |

#### Fiber F

|      |     |       | Libei L |     |
|------|-----|-------|---------|-----|
| 300  | 50  | 21/2  |         | .88 |
| 900  | 50  | 21/2  |         | .83 |
| 900  | 90  | 2 1/2 |         | .83 |
| 2700 | 150 | 2 1/2 |         | .88 |
| 2700 | 270 | 21/2  |         | .88 |
| 5400 | 540 | 21/2  |         | .88 |

(A) 2¢/lb. additional for cones less than 3# and tubes less than 2#.

Terms: Net 30 days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

#### Industrial Rayon Corp.

| EII. | -41   | January | 27  | 1054 |
|------|-------|---------|-----|------|
| Ette | ctive | January | 21. | 1300 |

| Denier | Filament | Turns per In. | Type                   | 2.8 Lb Cones | 4.4 Lb Cones | Beams | 2.2 Lb Tubes | 4.4 Lb Tubes |
|--------|----------|---------------|------------------------|--------------|--------------|-------|--------------|--------------|
| 100    | 40       | 2.5 "S"       | Bright                 | .99          |              | .99   |              |              |
| 150    | 40       | 2.5 "S"       | Bright                 | .86          |              | .86   |              |              |
| 150    | 40       | 2.5 "S"       | Luster #4              | .86          |              | .86   |              |              |
| 150    | 40       | 2.5 "S"       | Bright inter-          |              |              |       |              |              |
|        |          |               | mediate stren          |              |              |       |              |              |
| 200    | 20       | 2.5 "S"       | Bright                 | .79          |              |       |              |              |
| 200    | 40       | 2.5 "S"       | Bright                 | .79          |              |       |              |              |
| 300    | 44       | 2.5 "S"       | Bright                 | .70          |              | .70   |              |              |
| 300    | 80       | 2.5 "S"       | Bright                 | .70          |              | .70   |              |              |
| 300    | 80       | 2.5 "S"       | Luster #4              | .70          |              | .70   |              |              |
| 300    | 80       | 2.5 "S"       | Bright extra<br>strong | 72           |              | .72   |              |              |
| 450    | 60       | 2.0 "S"       | Bright                 |              | .67          | .67   |              |              |
| 600    | 90       | 1.5 "S"       | Bright                 |              | .66          | .66   | .66          | .66          |
| 900    | 50       | 2.0 "S"       | Bright                 |              | .65          | .65   | .65          | .65          |
| 900    | 150      | 1.5 "S"       | Bright                 |              | .65          | .65   | .65          | .65          |

Luster #4 is semi-dull.

Luster ±4 is semi-dull. Standard skein lengths at 2,100 yards for 900 denier, 3,200 yards for 600 denier, 4,400 yards for 450 denier, and 6,500 yards for 300 denier—all at 2¢ per pound over cone prices. 900 denier 6 turns—Plus 8¢ for cones.

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges allowed at lowest published rate to all points east of the Mississippi Biver. River.

PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

#### North American Rayon Corp.

| Current Prices            |                |                  |  | Cones                         | 90           |           |
|---------------------------|----------------|------------------|--|-------------------------------|--------------|-----------|
| First<br>Quality<br>Yarns | 75/30<br>75/30 | 181 M I 3.5      | Knitting",<br>Jacquard and<br>Velvet Cones | No Twist<br>Knitting<br>Cones | STREEMS, and | Untreated |
|                           | 75/30          | 15               |  |                               | 1.32         |           |
| Normal                    | 75/30          | 20               |  |                               | 1.35         |           |
| Strength Yarns            | 100/40/60 Brt. | 3.5              |  |                               | .99          | .91       |
| NARCO                     | 100/40/60      | 12               |  |                               | 1.17         |           |
|                           | 125/52         | 3                | \$.91                                      |                               | .91          | .85       |
|                           | 125/52         | 10               |  |                               | 1.08         |           |
|                           | 125/60         | 3                |  |                               | .92          |           |
|                           | 135/52         | 3                |  |                               | .90          |           |
|                           | 150/42         | 3                | .85  |                               | .86          | .81       |
|                           | 150/42         | 0<br>3<br>3<br>3 |  | \$.66                         |              |           |
|                           | 150/60         | 3                |  |                               | .86          |           |
|                           | 150/75         | 3                |  |                               | .86          |           |
|                           | 300/75         | 3                | .70  | 0.0                           | .70          |           |
|                           | 300/75         | 0                |  | .60                           | 00           |           |
|                           | 300/75         | 6 3              | 0.0  |                               | .80          |           |
|                           | 600/98         | 3                | .66  |                               | .66          |           |
|                           | 900/46         | 2.5              | .65  |                               | .65          |           |
|                           | 1800/92        | 2.5              | .65  |                               | .65          |           |
| Semi-High                 | 300/75         | 3                |  |                               | .71          |           |
| Strength Yarns            | 300/75 Brt.    | 6                |  |                               | .81          |           |

Strength Yarns 300/75 Brt. 0

\*Oiled Cones. 01 per pound extra for Graded Yarns only.

\*1 lb. tubes \$.02 per pound extra for Graded Yarns only.

Terms: Net 30 days f.o.b. shipping point. Minimum freight allowed to consignee's nearest freight station East of the Mississippi River. To points West of the Mississippi River minimum freight to Memphis, Tenn. allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates if sold f.o.b. delivery point.

#### RAYON HIGH TENACITY YARN and FABRIC

American Enka Corp. Effective April 2, 1956

|          | Tempra (High Tenacit     | y)            |
|----------|--------------------------|---------------|
| Denier   | Elongation               | Beams & Cones |
| 1100/480 | Low                      | \$.62         |
| 1230/480 | High                     | .62           |
| 1650/720 | Low                      | .58           |
| 1820/720 | High                     | .58           |
| 2200/960 | High & Low               | .58           |
|          | Suprenka (Extra High Ten | acity)        |
| 1650/720 | Low                      | .61           |
| 1900/720 | High                     | .61           |
| 2200/960 | Low                      | .60           |

Beams Only.

Terms: Net 30 days, f.o.b. Enka, North Carolina, or Lowland Ten-nessee; minimum freight allowed to first destination east of the Mis-sissippi River.

(Continued from Page 113)

William B. Shepard has been named manager of the newly-established rayon staple sales department of the American Enka Corp.

Fred Tattersall has been promoted to manager of the American System Worsted & Sales Division, Whitin Machine Works.

Carl I. Taber has been named merchandising representative at New York for the women's wear merchandising section, Textile Fibers Department, Du Pont Co.



Arthur E. Young

Arthur E. Young was named manager of the new textile Fibers department of Dow Chemical Co. set up to handle the company's new fiber, Zefran. Mr. Young was formerly assistant manager of the company's plastics department.

Celanese Corp. of America has announced the appointments of

Laurence T. Gerrity as textile sales development manager at Charlotte, N. C., and Peter H. Conze as textile district sales manager at New York.

James F. Adams, Jr., has been appointed general manager of the technical service department, Solvay Process Division, Allied Chemical & Dye Corp., and Norman C. Weil named technical advisor. Wilbur L. Epting, Jr., has been made manager of the company's new chlorine-caustic soda plant at Brunswick, Ga., and Bruce T. Smith as assistant manager.

William H. Poisson has been named technical sales representative for Caprolan deep-dye nylon and tensile-tough nylon by National Aniline Division, Allied Chemical & Dye Corp. Robert E. Mulcahy was named New England representative for Caprolan, and Joe H. Christian sales representative at the Greensboro office. Fabian H. Barch and Harry A. Greene have been assigned as textile technicians at the Chesterfield plant's fiber application laboratory.

**John T. Hallinan** has joined American Bemberg as assistant to James C. Fortune, advertising and sales manager.

Commercial Factors Corp. has appointed David G. Foulk assistant

vice president of its newly-formed Operations Control Division.



George H. Hotte

The Council of The Textile Institute, Manchester, England, has named George H. Hotte, F.T.I., convenor of the Institute's U. S. A. panel. Mr. Hotte is director of fiber sales and service, National Aniline Division, Allied Chemical and Dye Corp.

Earl F. Harris has been elected president of the Rodney Hunt Machine Co., Orange, Mass.

#### Deaths

Lew Hahn, longtime president of the National Retail Dry Goods Association up to the time of his retirement in 1952, died July 26.

Harry Maurus, one time sales manager of Duplan Corp. and an outstanding figure in the marketing of silk fabrics, died July 29 at the age of 83.

#### MARSHALL and WILLIAMS CORPORATION

cordially invites you to visit

BOOTHS 262 & 263

at the

**Southern Textile Exposition** 

October 1st through 5th

Greenville, S.C.

#### M & W Representatives at the Exposition

| RICHMOND VIALL  |     |  |  | President        |
|-----------------|-----|--|--|------------------|
| JOHN C. NASH    |     |  |  | . Vice President |
| FRED H. LAND .  |     |  |  | . General Mgr.   |
| JAMES A. LOVE   |     |  |  | Sales Engineer   |
| E. E. FORD .    |     |  |  | Sales Engineer   |
| ALBERT J. MARSH | ALL |  |  | Sales Engineer   |
| WILLIAM BROWN   |     |  |  | Sales Engineer   |

For years we have concentrated our entire efforts on the manufacture of tentering equipment of all kinds, and the development of auxiliary equipment which is a natural complement of tentering. At the Exposition we will present for your inspection the latest M & W products. The entire line includes . . .

HIGH SPEED TENTER FRAMES

MERCERIZING TENTERS

PIN TENTERS

TENTERETTES

TENSIONLESS BATCHERS

CONSTANT TENSION WINDERS

SWING PLAITERS

LET-OFF STANDS

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SELVAGE UNCURLERS

TENTER CLIPS

PIN PLATES & CLIPS



MARSHALL and WILLIAMS CORPORATION PROVIDENCE, R. I. . GREENVILLE, S.C. . NEW YORK, N. Y.

#### American Viscose Corp.

Effective April 2, 1956 (Revised as of May 31, 1956)

|        | Super Ra  | yflex    |       |             |
|--------|-----------|----------|-------|-------------|
| Denier | Filament  | Twist    | Beams | Cones       |
| 1650   | 980       | 0        | \$.61 | \$.61       |
| 1650   | 980       | 4.1Z     | .61   |             |
|        | Tire Yo   | ırn      |       |             |
| 1100   | 490       | 2.5Z     | .62   |             |
| 1650   | 980       | 0        | .58   | .58         |
| 1650   | 980       | 3.2Z     | .58   |             |
| 2200   | 980       | 0        | .58   | .58         |
|        | High Stre | ngth     |       |             |
| 1150   | 490       | 2.5Z     | .62   | .62         |
| 1230   | 490       | 3.6Z     | .62   | .62         |
| 1650   | 980       | 3.5Z     | .58   | .58         |
| 1875   | 980       | 3.6Z     | .58   | .58         |
| -      | <br>      | C24 -42- |       | T-F 41 BT-4 |

Super Rayflex, Tire Yarn and High Strength yarns are sold Guaranteed for Dyeing."

Tire Fabric

1100/490/2

1100/490/2 .72
Above prices 200,980/2 .665
Above prices based on 80% minimum Carcass, 15% maximum Top Ply, 5% maximum Breaker.
1650/980/2 \*\*Production Factor\*\*

525 Open 300 490 Top Ply .675
115 275\*\*

\* Determine by dividing total ends by picks.

\* Orders limited to 5% total 1650 fabric booked for any given

period. SUPER RAYFLEX FABRIC Add .03 to above tire fabric prices.

The following deposit charges are made on invoices:

Beams
Crates (Metal)
Fabric Shell Rolls
Same to be credited upon return in good condition—freight collect.

Terms: Net 30 days.

#### E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

**Current Prices** 

|       |                      | per Cordura'            |                |
|-------|----------------------|-------------------------|----------------|
|       | (a                   | ali packages)           |                |
| 1100  | 480                  | 2                       | \$.68          |
| 1250  | 480                  | 2                       | .68            |
| 1650  | 720                  | 2                       | .61            |
| 1900  | 720                  | 2                       | .61            |
| 2200  | 960                  | 2                       | .60            |
| 2450  | 960                  | 2                       | .60            |
| Beams | containing ends of c | direct dyed yarn \$3.30 | per end extra. |

Beams containing ends of direct dived yarn \$5.00 per child easis. Terms: Net 30 days.

Domestic Freight Terms are F.O.B. shipping point, freight prepald our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Industrial Rayon Corp.

Effective March 26, 1956 Unbleached Bright High Tenacity Yarns SINGLE END BEAMS AND CONES:

|      |      | Turns   | 4.4 Lb. |       | 2.2 Lb. | 4.4 Lb. |
|------|------|---------|---------|-------|---------|---------|
| Den. | Fil. | Per In. | Cones   | Beams | Tubes   | Tubes   |
| 1100 | 480  | 1.5 "Z" | .62     | .62   | .62     | .62     |
| 1650 | 720  | 1.5 "Z" | .58     |       | .58     | .58     |
| 2200 | 1000 | 1.5 "Z" | .57     | .57   | .57     | .57     |
| 3300 | 1440 | 1.5 "Z" | .58     | .58   | .58     | .58     |
| 4400 | 2000 | 1.5 "Z" | .57     | .57   | .57     | .57     |

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges allowed at lowest published rate to all points east of the Mississippi River.

North American Rayon Corp.

High-Strength Yarns-SUPER-NARCO Twist Cones Beams 3Z 3Z \$.565 Super High Strength Yarns—720 1.5Z .565

Terms: Net 30 days, f.o.b. shipping point. Minimum freight allowed to consignee's nearest freight station East of the Mississippi River. To points West of the Mississippi River minimum freight to Memphis, Tenn. allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates if sold f.o.b delivery point.

#### ACETATE FILAMENT YARN

American Viscose Corp.

Current Prices

Effective December 20, 1955

Bright and Dull · Intermediate Twist

| Denier &<br>Filaments<br>55/14 | Cones &<br>4-6 Lb.<br>Tubes<br>\$.99 | Twister<br>Tubes<br>8.97 | Warps<br>\$1.00 | Spinning<br>Cones<br>\$.93 | Twist<br>Warps<br>8.94 |
|--------------------------------|--------------------------------------|--------------------------|-----------------|----------------------------|------------------------|
| 75/20                          | .95                                  | .93                      | .96             | .89                        | .90                    |
| 100/28                         | .91                                  | .89                      | .92             | .85                        | .86                    |
| 120/32                         | .82                                  | .80                      | .83             | .76                        | .77                    |
| 150/41                         | .74                                  | .73                      | .75             | .69                        | .70                    |
| 200/54                         | .70                                  | .68                      | .71             | .66                        | .67                    |
| 300/80                         | .66                                  | .64                      | .67             | .62                        | .63                    |

. Standard Twist 2c additional.

#### Celanese Corp. of America

**Current Prices** 

Effective December 19, 1955

Bright and Dull

|              | Interme     | diate T |             |             | Spinnin | g Twist |         |
|--------------|-------------|---------|-------------|-------------|---------|---------|---------|
| Denier and   | 4 & 6-Lb    |         | 4 &<br>6-TM | 4-<br>Pound |         |         | O Twist |
| Filaments    | Cones       | Beams   | Tubes       | Cheeses     | Cones   |         | Tubes   |
| 45/13        | \$1.12      | \$1.13  | 8           | 8           | 8       | \$1.07  | \$      |
| 55/15        | .99         | 1.00    |             |             | .93     | .94     | .875    |
| 75/20        | .95         | .96     | .93         |             | .89     | .90     | .79     |
| 75/50        | .97         | .98     | .95         |             |         |         | .84     |
| 100/26-40    | .91         | .92     | .89         |             | .85     | .86     | .77     |
| 120/40       | .82         | .83     | .81         |             | .76     | .77     |         |
| 150/40       | .74         | .75     | .74         | .74         | .69     | .70     | .66     |
| 200/52       | .70         | .71     | .70         |             | .66     | .67     |         |
| 300/80       | 66          | .67     | .66         |             | .62     | .63     | .60     |
| 450/120      | .64         | .65     | .64         |             | .60     | .61     |         |
| 600/160      | .62         | .63     | .62         |             |         |         |         |
| 900/80-240   | .60         | .61     | .60         |             |         |         | .58     |
| 3 to 5 Turns | on Cones    |         | ns s        | 02 Addit    |         |         |         |
| 150 Denier   |             |         |             |             |         |         |         |
| 55/0/15Dull  |             |         |             |             |         |         |         |
| 2-Pound Ch   |             |         |             | 1 Less T    | han 4-  | Pound C | heeses  |
| 2-BU and 4   |             |         |             |             |         |         |         |
|              | et 30 days. |         |             |             |         |         |         |

transportation allowed to destination in U.S.A. east of the Mississippi

River.
Prices subject to change without notice.
All previous prices withdrawn.
Note: Prices on unlisted items can be obtained upon request.

#### Celaperm Filament Yarn Prices

| Denier and   4 & 6-Lb.     Filaments   Cones   Beams   Cones   Beams   55/15   \$1.37   \$1.38   \$1.31   \$1.32 |    | g Twist | Spinning | ate Twist | Intermedia |            |
|--|----|---------|----------|-----------|------------|------------|
|  |    | -       |          |           | 4 & 6-Lb.  | Denier and |
| 55/15 \$1.37 \$1.38 \$1.31 \$1.32  |    |         | Cones    | Beams     | Cones      | Filaments  |
|  | 1  | \$1.32  | \$1.31   | \$1.38    | \$1.37     | 55/15      |
| 75/20 1.34 1.35 1.28 1.29  | )  | 1.29    | 1.28     | 1.35      | 1.34       | 75/20      |
| 100/26 1.28 1.29 1.22 1.23   | 1  | 1.23    | 1.22     | 1.29      | 1.28       | 100/26     |
| 120/40 1.19 1.20 1.13 1.14   | 1  | 1.14    | 1.13     | 1.20      | 1.19       | 120/40     |
| 150/40 1.11 1.12 1.06 1.07   | į. | 1.07    | 1.06     | 1.12      | 1.11       | 150/40     |
| 200/52 1.05 1.06 1.01 1.02   | 1  | 1.02    | 1.01     | 1.06      | 1.05       | 200/52     |
| 300/80 1.01 1.02 .97 .98   | \$ | .98     | .97      | 1.02      | 1.01       | 300/80     |
| 450/120 .99 1.00 .95 .96   | į. | .96     | .95      | 1.00      | .99        | 450/120    |
| 600/160 .97 .98  |    |         |          | .98       | .97        | 600/160    |
| 900/80 .94   |    |         |          |           |            |            |

3 to 5 Turns on Cones or Beams - \$.02 Additional

Effective March 11, 1955

#### Celaperm Black Yarn Prices

|                         | Intermedi          | ate Twist | Spinning Twist |        |
|-------------------------|--------------------|-----------|----------------|--------|
| Denier and<br>Filaments | 4 & 6-Lb.<br>Cones | Beams     | Cones          | Beams  |
| 55/15                   | \$1.17             | \$1.18    | \$1.11         | \$1.12 |
| 75/20                   | 1.14               | 1.15      | 1.08           | 1.09   |
| 100/26                  | 1.08               | 1.09      | 1.02           | 1.03   |
| 120/40                  | .99                | 1.00      | .93            | .94    |
| 150/40                  | .91                | .92       | .86            | .87    |
| 200/52                  | .85                | .86       | .81            | .82    |
| 300/80                  | .81                | .82       | .77            | .78    |
| 450/120                 | .79                | .80       | .75            | .76    |
| 600/160                 | .77                | .78       |                |        |
| 900/80                  | .74                |           |                | ****   |

900/80

3 to 5 Turns on Cones or Beams — \$.02 Additional
Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.
Prices subject to change without notice.
All previous prices withdrawn.
Note: Prices on unlisted items can be obtained upon request.

#### E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

|   |                                 |  | Ace   | tate   |  |  |  |             |  |
|---|---------------------------------|--|---|--|--|--|--|-------------|--|
|   | Int                             | ermedi                                 | ate Tw  | ist  | Low                                    | Low Twist                              |  | Zero Twist  |  |
| Denier &<br>Filament  | % & 4 Lb.                       | 4-6 Lb.<br>Twist                       | Cones   | Beams  | Cones                                  | Beams                                  | Tubes  | Beams       |  |
| 45/13/24<br>55/18/24<br>75/24<br>75/50<br>100/32<br>100/66<br>120/40/50<br>150/16<br>150/40                     |                                 | .93<br>.95<br>.89                      | 1.12<br>.99<br>.95<br>.97<br>.91<br>.93<br>.82<br>.78 | 1.13<br>1.00<br>.96<br>.98<br>.92<br>.94<br>.83<br>.79 | .89<br>.85<br>.76                      | 1.07<br>.94<br>.90<br>.86<br>.77       | 1.05<br>.875<br>.79<br>.84<br>.77<br>.79<br>.73<br>.69 | .935<br>.89 |  |
| 200/60<br>240/80<br>300/80<br>450/120<br>600/80/160<br>900/44/70/240<br>1800/88<br>2700/132/210<br>3200/160/210 | .66<br>.64<br>.62<br>.60<br>.61 | .70<br>.66<br>.64<br>.62<br>.60<br>.61 | .70<br>.68<br>.66<br>.64<br>.62<br>.60<br>.61<br>.61  | .71<br>.67<br>.65<br>.63<br>.61<br>.62<br>.62          | .66<br>.62<br>.60<br>.59<br>.59<br>.60 | .67<br>.63<br>.61<br>.60<br>.60<br>.61 | .65<br>.60<br>.58<br>.59                               | .62         |  |

A. 1# % Tubes—add .02 to 2 & 4 lb. % Tubes Price. B. Regular Twist (3 thru 5 t.p.i.)—add .02 to Intermediate Twist Price. C. 2 lb. Twisted Tubes—.01 less than 4 & 6 lb. Twisted Tubes on 150-200-300 Denier Intermediate Twist.







When a U. S. Representative visits your mill, he offers a world of useful data on MODERN traveler practice-plus the finest travelers it is possible to produce.



"A Style and Size for Every Textile Fiber"!

Prompt Shipment from Providence & Greenville stocks



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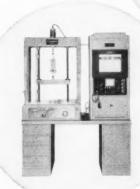
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#### an entirely new **Textile Tester**

MODEL CET



opening new worlds of information in the evaluation of materials from single fiber to finished construction.

TENSILE HYSTERESIS COMPRESSION

A wholly new standard of accuracy and versatility in the range 0 - 2,000 lbs.

Factory representatives in attendance

воотн NO.

> (If unable to attend please request CET Literature).

# SCOTT TESTERS, INC.

70 BLACKSTONE ST., PROVIDENCE, R. I.

Rep. for Ala., Ky., Tenn., Va. (also Southeastern Service & Repairs) Scott Testers (Southern), Inc. P.O. Box 834 Spartanburg, S. C.

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REPRESENTATIVES IN FOREIGN COUNTRIES

#### Color-Sealed

|           | Intermedia<br>Twisted Tubes |         |         | ite Twist Lov |         | Twist    | Zero  | Twist |
|-----------|-----------------------------|---------|---------|---------------|---------|----------|-------|-------|
| Denier    | 2 Lb. 4 &                   | 6 Lb.   | Cones   | Beams         | Cones   | Beams    | Tubes | Beams |
| 55/18     |                             |         | 1.37    | 1.38          |         | 1.32     | 1.245 | 1.315 |
| 75/24     |                             |         | 1.34    | 1.35          | 1.28    | 1.29     | 1.18  | 1.28  |
| 100/32    | 1.26                        | 1.26    | 1.28    | 1.29          | 1.22    | 1.23     | 1.14  |       |
| 150/40    | 1.10                        | 1.11    | 1.11    | 1.12          | 1.06    | 1.07     | 1.03  | 1.06  |
| 200/60    | 1.04                        | 1.05    | 1.05    | 1.06          | 1.01    | 1.02     | 1.00  |       |
| 300/80    | 1.00                        | 1.01    | 1.01    | 1.02          | .97     | .98      | .95   | .97   |
| A. Regula | r Twist-                    | -add .0 | 2 to in | termed        | iate tv | vist pri | ces.  |       |

|                          |              |                          | Ble  | ack   |      |       |       |       |
|--------------------------|--------------|--------------------------|------|-------|------|-------|-------|-------|
|                          | 2 & 4<br>Lb. | termed 4 & 6 Lb. Twister |      | rist  | Low  | Twist | Zero  | Twist |
| Denier                   | Tubes        | Tubes                    |      | Beams |      | Beams | Tubes | Beams |
| 55/18                    |              |                          | 1.17 | 1.18  | 1.11 | 1.12  | 1.045 | 1.115 |
| 75/24                    |              | 1.12                     | 1.14 | 1.15  | 1.08 | 1.09  | .98   | 1.08  |
| 100/32                   |              | 1.06                     | 1.08 | 1.09  | 1.02 | 1.03  | .94   |       |
| 150/40                   |              | .91                      | .91  | .92   | .86  | .87   | .83   | .86   |
| 200/60                   |              | .85                      | .85  | .86   | .81  | .82   | .80   |       |
| 300/40-80                | .81          | .81                      | .81  | .82   | .77  | .78   | .75   | .77   |
| 450/120                  | .79          |                          | .79  | .80   | .75  | .76   |       |       |
| 600/160                  | .77          |                          | .77  |       | .73  |       |       |       |
| 900/44-70-240            |              |                          |      |       |      |       |       |       |
| 1800/88                  | .74          |                          | .74  |       | .73  |       |       |       |
| 2700/132-210<br>3000/210 | .74          |                          | .74  |       | .73  |       |       |       |
| 3200/160                 | .74          |                          | .74  |       |      |       |       |       |

A. Regular Twist (3 thru 5 t.p.i.) -add .02 in intermediate twist

prices.

B. 2 lb. Twisted Tubes are the same as 4 & 6 lb. except on 150-200 and 300 denier intermediate twist where the price is .01 less. C. 1 lb. \%" Tubes—add .02 to 2 and 4 lb. \%" Tubes.

Terms: Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

#### Eastman Chemical Products, Inc.

Tennessee Eastman Co.

Effective December 19, 1955

#### Estron Yarn, Bright or Dull - White

| Denier &  | Regular<br>Twist | Inter  | mediate 7 | Cwist  | Low T  | wist   | Zere     |
|-----------|------------------|--------|-----------|--------|--------|--------|----------|
| Filament  | Cones            | Cones  | Tubes     | Beams  | Cones  | Beams  | Tubes    |
| 55/13     | \$1.01           | \$0.99 | \$0.97    | \$1.00 | \$0.93 | \$0.94 | 80.871/2 |
| 75/19     | .97              | .95    | .93       | .96    | .89    | .90    | .79      |
| 75/49     | .99              | .97    | .95       | .98    |        |        |          |
| 100/25    | .93              | .91    | .89       | .92    | .85    | .86    | .77      |
| 120/30    | .86              | .84    | .82       | .85    | .78    | .79    |          |
| 150/38    | .76              | .74    |           | .75    | .69    | .70    | .66      |
| 200/50    | .72              | .70    |           | .71    | .66    | .67    |          |
| 300/75    | .68              | .66    |           | .67    | .62    | .63    | .60      |
| 450/114   | .66              | .64    |           | .65    | .60    | .61    |          |
| 600/156   | .64              | .62    |           | .63    | .59    | .60    | .60      |
| 900/230   | .62              | .60    | 4111      | .61    |        |        | .58      |
| 900 &c    |                  |        |           |        |        |        | 100      |
| Heavier   |                  |        |           |        |        | 1000   | .58      |
| Current F | rices            |        |           |        |        |        |          |

#### Chromspun—Standard Colors (Except Black)

| Denier &   | Regular Twist |       | Intermed | liate Twist | Low Twist |        |
|------------|---------------|-------|----------|-------------|-----------|--------|
| Filament   | Cones         | Beams | Cones    | Beams       | Cones     | Beams  |
| 55/13      | \$1.39        | 31.40 | \$1.37   | \$1.38      | \$1.31    | \$1.32 |
| 75/19      | 1.36          | 1.37  | 1.34     | 1.35        | 1.28      | 1.29   |
| 100/25     | 1.30          | 1.31  | 1.28     | 1.29        | 1.22      | 1.23   |
| 150/38     |               |       | 1.11     | 1.12        | 1.06      | 1.07   |
| 300/75     |               |       | 1.01     | 1.02        | .97       | .98    |
| 450/114    |               |       | .99      | 1.00        | .95       | .96    |
| 900/230    |               |       | .94      | .95         |           | 100    |
| Current Pr | ices          |       |          |             |           |        |

#### Chromspun-Black

| Denier &<br>Filament | Regular Twist<br>Cones | Intermediate<br>Cones | Twist<br>Beams | Low Twist &<br>Spun Twist<br>Beams |
|----------------------|------------------------|-----------------------|----------------|------------------------------------|
| 55/13                | \$1.19                 | \$1.17                | \$1.18         | \$1.12                             |
| 75/19                | 1.16                   | 1.14                  | 1.15           | 1.09                               |
| 100/25               | 1.10                   | 1.08                  | 1.09           | 1.03                               |
| 150/38               | .93                    | .91                   | .92            | .87                                |
| 200/50               | .87                    | .85                   | .86            | .82                                |
| 300/75               | .83                    | .81                   | .82            | .78                                |
| 450/114              | .81                    | .79                   | .80            | .76                                |
| 900/230              | .76                    | .74                   | .75            |                                    |

Prices are subject to change without notice.

Prices on special items quoted on request. Terms: Net 30 days. Payment-U. S. A. dollars.

Transportation charges prepaid or allowed to destination in the United States east of Mississippi River. Seller reserves right to select route and method of shipment. If Buyer requests and Seller agrees to a route or method involving higher than lowest rate Buyer shall pay the excess of transportation cost and tax.

#### RAYON STAPLE and TOW

#### American Viscose Corp.

Current Prices

| Rayon Staple  |                   |
|---|-------------------|
|   | Bright<br>ad Dull |
| Regular   | \$ .32            |
| Extra Strength 1.0 Denier "Viscose 32A" "Avisco Crimped"  | .34<br>.36        |
| 1.25 Denier   | .34               |
| 3.0 & 5.5 Deniers   | .33               |
| 8.0 & 15.0 Deniers  | .35               |
| "Avisco Smooth"<br>8.0, 15.0 & 22.0 Deniers   | .37               |
| Short Staple Blend  | .34               |
| Rayon Tow   |                   |
| Grouped Continuous Filaments (200,000 Total Denier) 1.5, 3.0 & 5.5 Denier Per Filament 9.0 Denier Per Filament Grouped Continuous Filaments (4400/300 & 2000/1500) Prices of other descriptions on request. Terms: Net 30 days. | .34<br>.36<br>.65 |

#### Celanese Corp. of America

Current Prices

|                  | Rayon Tow |               |
|------------------|-----------|---------------|
|                  | ,         | Bright & Dull |
| 1.5, 3, 5 D.P.F. |           | .34           |

Rayon Staple

Bright \$.31

5225

Dull

#### Courtaulds (Alabama) Inc.

Effective April 23, 1956

11% and 3 denier

Turquoise Malachite Green

| Available in 1%" |             |              | 0.02          | 0.01    |
|------------------|-------------|--------------|---------------|---------|
| "Colo            | ray" Spun D | yed Rayo     | on Staple     |         |
|                  | 1½ Den.     |              | 43/2 Den.     | Price   |
|                  | 1-9/16"     | 2"           | 6"            | per Lb. |
|                  | (Code n     | umbers for c | olor and deni | ier)    |
| Black            | 1404        | 1419         | 1425          | 37¢     |
| Tan              | 8004        | 8019         | 8025          | 39€     |
| Medium Brown     | 8804        | 8819         | 8825          | 39€     |
| Silver Grey      | 1004        | 1019         | 1025          | 39€     |
| Terra Cotta      | 8204        | 8219         | 8225          | 39€     |
| Khaki            | 3004        | 3019         | 3025          | 40¢     |
| Dark Brown       | 8604        | 8519         | 8525          | 40€     |
| Slate Grey       | 0804        | 0819         | 0825          | 43€     |
| Light Blue       | 4004        | 4019         | 4025          | 44¢     |
| Sulphur          | 2004        | 2019         | 2025          | 44¢     |
| Apple Green      | 5104        | 5119         | 5025          | 45€     |
| Peacock Blue     | 4604        | 4619         | 4625          | 46¢     |
| Medium Blue      | 4204        | 4219         | 4225          | 48¢     |
| Dark Blue        | 4404        | 4419         | 4425          | 49€     |
| Hunter Green     | 5404        | 5419         | 5425          | 49€     |
| Indian Yellow    | 2504        | 2519         | 2525          | 49¢     |
| Pink             | 6004        | 6019         | 6025          | 50€     |
|                  |             |              |               |         |

5219 7019 7004 (In addition to the above, Black is also available in: 1½ den. 1¼" (1401) 3 den. 1-9/16" (1416) 4½ den. 2" 3 den. 1½" (1413) 3 den. 2½" (1420) 4½ den. 4") Terms: Net 30 days, f.o.b. LeMoyne, Alabama. Minimum transportation allowed to points in U.S.A. east of Mississippi River.

6019 4819

6004 4804

5204

#### The Hartford Rayon Co.

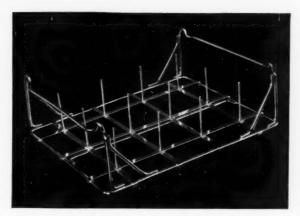
Div. Bigelow-Sanford Carpet Co., Inc.

#### Rayon Staple

Effective February 8, 1956 DECITI AD

| REGUERIU              | 1.5 denier Bright              |     |
|-----------------------|--------------------------------|-----|
|                       | 11/2" and 2"                   | 32¢ |
| VISCALON 66 (Crimped) |                                |     |
|                       | 8 denier 2" Bright             |     |
|                       | 15 denier 3" Bright            | 35€ |
|                       | 15 denier 3" Dull              | 35€ |
| "KOLORLOK"—Solution   | Dyed Rayon Staple—15 denier 3" |     |
|                       |                                |     |

|                | Bright | Dull |  |
|----------------|--------|------|--|
| Cloud Grey     | 45€    | 45¢  |  |
| Sandalwood     | 45€    | 45c  |  |
| Nutria         | 45¢    | 45¢  |  |
| Sea Green      | 45€    | 45¢  |  |
| Mint Green     |        | 45c  |  |
| Champagne      | 45€    | 45¢  |  |
| Café Brown     | 55€    |      |  |
| Midnight Black | 45¢    | 102  |  |
| Gold           |        | 45¢  |  |
| Turquoise      | 45e    | 90€  |  |



#### New! Sterling Boards of Stainless Steel Bobbin — Cone — Shell — Quill

No rust, no replating, low maintenance when you use Sterling Stainless Steel Boards.

Sterling Boards are self-stacking—eliminate racks—

simplify handling-save space.

Sterling Boards are made to your individual specifications from either stainless steel or cadmium plated steel to hold the number and style of package you require. Write today and learn how you can save with Sterling Boards.

DESIGNERS ENGINEERS MANUFACTURERS



TEXTILE MACHINERY AND SUPPLIES

Specialists in Stainless Steel Products for the Textile Industry

Those who say they can't are usually right about it.



We who are responsible for the high quality of

#### LAMBERTVILLE THREAD GUIDES

never allow ourselves the luxury of believing that our product cannot be improved. Continual research in ceramic manufacturing techniques has made today's Lambertville porcelain guides the smoothest, hardest and most durable on the market. Available in white or "Durablu" finish.

# LAMBERTVILLE CERAMIC

AND MANUFACTURING COMPANY LAMBERTVILLE NEW JERSEY



Try this for size — Supranyl, Stein Hall's miracle size for nylon warps. It's unaffected by heat — and still it can be readily removed in your scouring bath. But that's not all! Supranyl, because of its unsurpassed affinity and adhesion to nylon yarns, offers you maximum protection against abrasion in weaving.

Find out now how Supranyl can save you many dollars in your operation. It requires no additives... stands greater dilution... and your initial cost is lower. Write today for more information, Textile Department TI-6.

**SUPRANYL** Withstands Heat-Setting ... yet is Easy to Remove!



#### ACETATE STAPLE and TOW

#### Celanese Corp. of America

| , | carretti i tices        | Staple              |               |
|---|-------------------------|---------------------|---------------|
| ( | Celanese Acetate Staple |                     | Bright & Dull |
|   | 2. 3, 5.5 & 8 Individ   | ual Deniers         | \$.32         |
|   | 12 & 17 Individual      |                     | .33           |
|   | 35 & 50 Individual      |                     | .36           |
| 1 | Variable Acetate Fibers |                     | .30           |
| , | 35 Individual Denier Fl | at Filament Acetate | .38           |
|   |                         |                     |               |

| Tow                              |               |
|----------------------------------|---------------|
| Celanese Celatow Acetate         | Bright & Dull |
| 2, 3, 5.5 & 8 Individual Deniers | \$.34         |
| 12 & 17 Individual Deniers       | .35           |
| 35 & 50 Individual Deniers       | .37           |

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi

Prices subject to change without notice.
All previous prices withdrawn.

#### NON CELLULOSIC YARN ACRYLIC

#### E. I. du Pont de Nemours & Co.

| Current Prices           | "Orlon" |              |              |
|--------------------------|---------|--------------|--------------|
|                          |         | 1st<br>Grade | 2nd<br>Grade |
| 75 denier, 30 filaments  |         | \$2.65       | \$2.35       |
| 100 denier, 40 filaments |         | 2.35         | 2.10         |
| 200 denier, 80 filaments |         | 2.25         | 2.00         |

Therms: Net 30 days.

These prices are subject to change without notice.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the contental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

#### NYLON

#### **Allied Chemical and Dye Corporation**

"Caprolan" Tensile Tough Nylon

Effective March 19, 1956

#### Heavy Yarns

|                                | Fila-                            |  |                |  |                              |
|--------------------------------|----------------------------------|--|----------------|--|------------------------------|
| Denier                         | ment                             | Turn/in.                                 | Type**         | Package  | Price/Lb.                    |
| 2100                           | 6 d/f                            | Nominal                                  | HB             | Parallel Paper Tube*   | \$1.27                       |
| 2500                           | 6 d/f                            | Nominal                                  | HB             | Parallel Paper Tube  | 1.27                         |
| 3360                           | 6 d/f                            | Nominal                                  | HB             | Parallel Paper Tube  | 1.26                         |
| 5000                           | 6 d/f                            | Nominal                                  | HB             | Parallel Paper Tube  | 1.25                         |
| 7500                           | 6 d/f                            | Nominal                                  | HB             | Parallel Paper Tube  | 1.24                         |
| 10,000                         | 6 d/f                            | Nominal                                  | HB             | Parallel Paper Tube  | 1.24                         |
| 15.000                         | 6 d/f                            | Nominal                                  | HB             | Parallel Paper Tube  | 1.23                         |
| 3360<br>5000<br>7500<br>10,000 | 6 d/f<br>6 d/f<br>6 d/f<br>6 d/f | Nominal<br>Nominal<br>Nominal<br>Nominal | HB<br>HB<br>HB | Parallel Paper Tube<br>Parallel Paper Tube<br>Parallel Paper Tube<br>Parallel Paper Tube | 1.26<br>1.25<br>1.24<br>1.24 |

15,000 6 d/T Nominal Terms—Net 30 daylect to change without notice. All prices are quoted f.o.b. shipping point.

Lowest freight cost prepaid or allowed east of Mississippi River.

\* Parallel Paper Tubes non-returnable, no charge.

\* Type is used to describe luster and tenacity.

Type HB: High Tenacity, Bright.

#### American Enka Corporation

#### Nylenka Filament Yarn Prices

Effective March 16, 1956

| Denier &<br>Filament | Twist | Luster    |   | Type         | Tenacity | Package | Yarn Weigh | Price per<br>Pound, Std. | Price per<br>Pound, Sub. |
|----------------------|-------|-----------|---|--------------|----------|---------|------------|--------------------------|--------------------------|
| 15/1                 | 0.5Z  | semi-dull |   | 9408         | Normal   | Pirn    | 1 lb.      | \$5.00                   | \$4.80                   |
| 30/6                 | 0.5Z  | semi-dull |   | 9412         | Normal   | Pirn    | 2 lb.      | 2.25                     | 2.10                     |
| 30/8                 | 0.5Z  | semi-dull |   | 9424         | Normal   | Pirn    | 2 lb.      | 2.25                     | 2.10                     |
| 40/8                 | 0.5Z  | semi-dull |   | 9426         | Normal   | Pirn    | 2 lb.      | 1.90                     | 1.75                     |
| 50/13                | 0.52  | semi-dull |   | 9442         | Normal   | Pirn    | 2 lb.      | 1.80                     | 1.70                     |
| 100/32               | 0.5Z  | semi-dull |   | 9652         | Normal   | Pirn    | 2 lb.      | 1.60                     | 1.55                     |
| 200/34               | 0.52  | bright    |   | 9822         | Normal   | Pirn    | 2 lb.      | 1.45                     | 1.40                     |
| 200/34               | 0.5Z  | bright    |   | 9222         | Normal   | Cone    | 4 lb.      | 1.45                     | 1.40                     |
| 210/34               | 0.5Z  | bright    |   | 9204         | High     | Pirn    | 2 lb.      | 1.45                     | 1.40                     |
| 210/34               | 0.5Z  | bright    |   | 9214         | High     | Cone    | 4 lb.      | 1.45                     | 1.40                     |
| 840/140              | 0.5Z  | bright    |   | 9202         | High     | Pirn    | 2 lb.      | 1.30                     | 1.20                     |
| 840/140              | 0.5Z  | bright    | 1 | 9208<br>9228 | High     | Cone    | 4 lb.      | 1.30                     | 1.20                     |
| 840/140              | 0.5Z  | bright    |   | 9302         | High     | Beam    | _          | 1.30                     | 1.20                     |
|                      |       |           |   |              |          |         |            |                          |                          |

Pirns charged at \$.25 each. Deposit refunded upon return of pirn in good condition. Cones are non-returnable. Beams and cradles are denosit carriers and remain property of American Enka Corporation. Terms: Net 30 days. Minimum common carrier transportation charges will be prepaid and absorbed to the first destination on or east of the Mississippi River. In prepaying transportation charges, seller reserves the right to select the carrier used.

#### The Chemstrand Corp.

| Current | Prices        |       |       |         |                       |                     |
|---------|---------------|-------|-------|---------|-----------------------|---------------------|
| Denier  | Fila-<br>ment | Twist | Type* | Package | Standard<br>Price/lb. | Second<br>Price/lb. |
| 10      | 1             | 0     | SD    | Bobbins | \$8.00                | \$7.60              |
| 15      | 1             | 0     | SD    | Bobbins | 5.00                  | 4.80                |
| 15      | 1             | 0     | D     | Bobbins | 5.05                  | 4.80                |

| 30  | 10  | Z    | SD | Bobbins | 2.25 | 2.10 |
|-----|-----|------|----|---------|------|------|
| 40  | 7   | Z    | SD | Bobbins | 2.00 | 1.75 |
| 40  | 13  | Z    | SD | Bobbins | 1.90 | 1.75 |
| 40  | 13  | Z    | D  | Bobbins | 1.95 | 1.75 |
| 50  | 17  | Z    | SD | Bobbins | 1.80 | 1.70 |
| 70  | 34  | Z    | SD | Bobbins | 1.60 | 1.55 |
| 70  | 34  | Z    | В  | Bobbins | 1.60 | 1.55 |
| 70  | 34  | Z    | HB | Bobbins | 1.65 | 1.55 |
| 100 | 34  | Z    | SD | Bobbins | 1.60 | 1.55 |
| 100 | 34  | Z    | HB | Bobbins | 1.65 | 1.55 |
| 140 | 68  | Z    | SD | Bobbins | 1.55 | 1.50 |
| 200 | 34  | Z    | В  | Bobbins | 1.45 | 1.40 |
| 210 | 34  | Z.   | HB | Bobbins | 1.45 | 1.40 |
| 260 | 17  | Z    | HB | Bobbins | 1.45 | 1.35 |
| 840 | 140 | Z    | HB | Beams   | 1.30 | 1.20 |
| 840 | 140 | Z    | HB | Tubes   | 1.30 | 1.20 |
| CT  |     | done |    |         |      |      |

Tubes 1.30 1.20 Terms: Net 30 days.

Lowest transportation paid to destination east of Mississippi River.

Note: All Standard Quality Yarn—No break.

Bobbins, tubes, beams, and crates for beams become the property of the yarn purchaser. Bobbins are invoiced at 25¢ or 45¢ each, depending on type; tubes are invoiced at 40¢ each; and beams and crates for beams are invoiced at \$25 respectively.

#### E. I. du Pont de Nemours & Co.

Textile Fibers Dept. Current Prices

#### Nylon Yarn

|        |               |            |       | Nylon   | ram         |                |              |
|--------|---------------|------------|-------|---------|-------------|----------------|--------------|
| Den-   | Fila-<br>Ment | Turn,      | Twist | Type*   | Package     | 1st .<br>Grade | 2nd<br>Grade |
| 7      | 1             | 0          | O     | 200     | Bobbin      | \$9.00         | \$8.55       |
| 10     | 1             | 0          | ő     | 200     | Bobbin      | 8.00           | 7.60         |
| 12     | 1             | 0          | O     | 200     | Bobbin      | 7.00           | 6.65         |
| 12     | 4             | 1/4        | Z     | 200     | Bobbin      | 7.00           | 6.65         |
| 15     | 1             | 0          | Ö     | 200     | Bobbin      | 5.00           | 4.80         |
| 15     | 1             | 0          | O     | 680     | Bobbin      | 5.05           | 4.80         |
| 15     | 3             | 3/4        | Z     | 200     | Bobbin      | 5.00           | 4.80         |
| 20     | 1             | 0          | Ö     | 200     | Bobbin      | 4.00           | 3.80         |
| 20     | 7             | 1/2        | Z     | 200     | Bobbin      | 2.75           | 2.55         |
| 20     | 7             | 1/2        | Z     | 680     | Bobbin      | 2.80           | 2.55         |
| 20     | 20            | 3/4        | Z     | 209     | Bobbin      | 6.00           |              |
| 30     | 10            | 1/2        | Z     | 100/200 | Bobbin      | 2.25           | 2.10         |
| 30     | 10            | 1/2        | Z     | 680     | Bobbin      | 2.30           | 2.10         |
| 30     | 26            | 1/2        | Z     | 200     | Bobbin      | 2,35           | 2.15         |
| 40     | 1             | 0          | Ö     | 100/200 | Bobbin      | 3.50           | 3,30         |
| 40     | 7             | 1/2        | Z     | 200     | Bobbin      | 2.00           | 1.75         |
| 40     | 13            | 1/2        | Z     | 100/200 | Bobbin      | 1.90           | 1.75         |
| 40     | 13            | 1/2        | Z     | 400     | Bobbin      | 2.00           | 1.85         |
| 40     | 13            | 1/2        | Z     | 670/680 | Bobbin      | 1.95           | 1.75         |
| 40     | 34            | 1/2        | Z     | 200     | Bobbin      | 2.00           | 1.80         |
| 50     | 7             | 1/2        | Z     | 200     | Bobbin      | 1.90           | 1.70         |
| 50     | 17            | 3/2        | Z     | 200     | Bobbin      | 1.80           | 1.70         |
| 50     | 17            | 1/2        | Z     | 670/680 | Bobbin      | 1.85           | 1.70         |
| 60     | 20            | 1/2        | Z     | 200     | Bobbin      | 1.70           | 1.60         |
| 70     | 17            | 1/2        | Z     | 100/200 | Bobbin      | 1.60           | 1.55         |
| 70     | 34            | 1/2        | Z     | 100/200 | Bobbin      | 1.60           | 1.55         |
| 70     | 34            | 1/2        | Z     | 300     | Bobbin      | 1.65           | 1.55         |
| 70     | 34            | 1/2        | Z     | 680     | Bobbin      | 1.65           | 1.55         |
| 80     | 26            | 1/2        | Z     | 200     | Bobbin      | 1.60           | 1.55         |
| 80     | 68            | 1/2        | Z     | 200     | Bobbin      | 1.65           | 1.55         |
| 100    | 34            | 1/2        | Z     | 100/200 | Bobbin      | 1.60           | 1.55         |
| 100    | 34            | 1/2        | Z     | 300     | Bobbin      | 1.65           | 1.55         |
| 100    | 34            | 1/2        | Z     | 680     | Bobbin      | 1.65           | 1.55         |
| 100    | 50            | 1/2        | Z     | 200     | Bobbin      | 1.60           | 1.55         |
| 140    | 68            | 1/2        | Z     | 100/200 | Bobbin      | 1.55           | 1.50         |
| 140    | 68            | 1/2        | Z     | 300     | Bobbin      | 1.60           | 1.50         |
| 200    | 20            | 3/4        | Z     | 100     | Bobbin      | 1.45           | 1.40         |
| 200    | 34            | 3/4        | Z     | 100/200 | Bobbin      | 1.45           | 1.40         |
| 200    | 34            | 3/4        | Z     | 680     | Bobbin      | 1.50           | 1.40         |
| 200    | 68            | 3/4        | Z     | 100/200 | Bobbin      | 1.45           | 1.35         |
| 210    | 34            | 3/4        | Z     | 300     | Bobbin/Beam | 1.45           | 1.40         |
| 260    | 17            | 1          | Z     | 100     | Bobbin      | 1.45           | 1.35         |
| 260    | 17            | î.         | Z     | 300     | Bobbin      | 1.45           | 1.35         |
| 400    | 68            | 3/4        | Z     | 100     | Bobbin      | 1.35           | 1.25         |
| 420    | 68            | 3/4        | Z     | 300     | Bobbin      | 1.35           | 1.25         |
| 780    | 51            | 1/2        | Z     | 300     | Bobbin      | 1.35           | 1.25         |
| 800    | 140           | 1/2        | Z     | 100     | Bobbin      | 1.35           | 1.25         |
| 840    | 136           | 1          | Z     | 300     | Bobbin      | 1.30           | 1.20         |
| 840    | 140           | 1/2        | Z     | 300/700 | Alum. Tube/ |                |              |
|        |               |            |       |         | Beam        | 1.30           | 1.20         |
| Color- | -Sealed<br>34 | Yarn<br>34 | Z     | 140     | Bobbin      | 1.80           | 1.75         |
|        | trial Ya      |            |       |         |             | Price/Lb.      |              |
| 2520   | 420           | 0          | 0     | 300     | Paper Tube  | 1.27           |              |
| 5040   | 2520          | 0          | 0     | 300     | Paper Tube  | 1.25           |              |
| 15120  | 2520          | 0          | 0     | 300     | Paper Tube  | \$1.23         |              |
|        |               |            |       |         |             |                |              |

These prices are subject to change without notice.

Terms—Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepald our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Following are invoiced as a separate item:
Bobbins at 25 cents or 45 cents each depending on type.

Aluminum Tubes at 40 cents each.

Tire Cord Beams (Domestic Shipments) \$220 each.

Cradles for Tire Cord Beams (Domestic Shipments) \$115.00 each.

(Beams and Cradles are deposit carriers and remain the property of E. I. du Pont de Nemours & Co.)

#### Types

\* Type is used to describe luster, tenacity, and size or oil content. Type 100 Bright, normal tenacity.
Type 200 Semidull, normal tenacity.
Type 209 Semidull, normal tenacity, #S-139 spin finish.
Type 300 Bright, high tenacity.
Type 400 Semidull, high tenacity.
Type 670 Dull, normal tenacity.
Type 680 Dull, normal tenacity.
Type 680 Dull, normal tenacity.
Type 700, Bright, high tenacity.
Type 140, Color-sealed, Black, normal tenacity.

# Interested In NON-STOP Production?

Then, you'll be interested in DIAMOND FINISH Eadie Rings. Their automatic oil lubrication permits higher speeds with lower ends-down ratio: and the oil reservoir can be refilled while the frame is running.







Rep. for the Carolinas & Va.: W. K. SHIRLEY, 25 Oak St., Belmont, N.C. Rep. for Ala., Ga., & Tenn: H. M. JACKSON, 216 Longview Dr., Jefferson, Ga.

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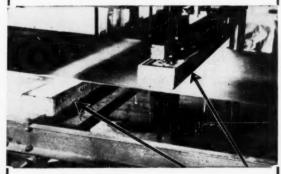
INFRA-RED

Plus — the economy of

GAS...



Red-Ray Radiant Gas Burners



Efficient • Durable • Flameless Instant Turn-off • Air-cooled

Red-Ray Manufacturing Co., Inc.

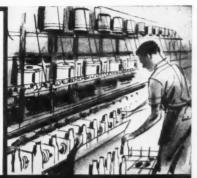
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Cliffside Park, N. J.

Tel: WHitney 3-1000



Aluminum Take-Up Bobbin. Hard worker with a long life...takes crushing pressure of any yarn.



Lestershire Bobbins by



Wood and Fibre
Twister Bobbins—
Low cost—long
life—for nonsteaming use.



Rayon Twister Bobbins—Handle rayon or nylon at high speed, with steaming.

SEE US AT GREENVILLE! Southern Textile Exposition Oct. 1 to 5 Booth No. 473

#### first choice of economy-wise mill men

Can your mill afford a full-time research program? Or even just one man to study nothing but bobbin problems? You won't need either when you use Lestershire Bobbins by National. Our research staff is working continually on your problems—new synthetic yarns, larger "packages," higher speeds—as they develop. You buy assurance when you buy Lestershire — assurance of the right bobbin for almost any spindle speed or yarn in use today.

Lestershire's program of research and development helps you in many ways. Quality control standards we've developed pay off in long, trouble-free bobbin and spindle life. Prices are realistic, too.

For prompt service, get in touch with your nearby National office or representative. In the South it's Odell Mill Supply Co., Greensboro, N. C.; Greenville Textile Supply Co., Greenville, S. C. Or write us at Wilmington, Delaware.



#### NATIONAL

VULCANIZED FIBRE CO.

WILMINGTON 99, DELAWARE

In Canada, National Fibre Company of Canada, Ltd. • Toronto 3 ALSO MANUFACTURERS OF NATIONAL VULCANIZED FIBRE, PHENOLITE LAMINATED PLASTIC, PEERLESS INSULATION, VUL-COT WASTEBASKETS NEW DIMENSIONS IN DESIGN AND SERVICE TO THE TEXTILE INDUSTRY

#### POLYESTER

#### E. I. du Pont de Nemours & Co.

Textile Fibers Dept. Current Prices

#### "Dacron"

|      |      |       |           |      | Tubes   |
|------|------|-------|-----------|------|---------|
| Den. | Fil. | Twist | Luster    | Type | 1st Gr. |
| 30   | 20   | 0     | Dull      | 57   | \$2.75  |
| 40   | 27   | 0     | Semi-Dull | 56   | 2.30    |
| 40   | 27   | 0     | Dull      | 57   | 2.35    |
| 70   | 14   | 0     | Bright    | 55   | 1.90    |
| 70   | 34   | 0     | Semi-Dull | 56   | 1.90    |
| 70   | 34   | 0     | Bright    | 55   | 1.90    |
| 70   | 34   | 0     | Dull      | 57   | 1.95    |
| 100  | 34   | 0     | Semi-Dull | 56   | 1.85    |
| 150  | 68   | 0     | Semi-Dull | 56   | 1.80    |
| 150  | 68   | 0     | Bright    | 55   | 1.80    |
| 220  | 50   | 0     | Bright    | 51   | 1.75    |
| 250  | 50   | 0     | Bright    | 55   | 1.75    |
| 1100 | 250  | 0     | Semi-Dull | 59   | 1.50    |
| 1100 | 250  | 0     | Bright    | 51   | 1.50    |
|      |      |       |           |      |         |

Terms: Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

#### Yarn Types

Bright High Tenacity
Semi-Dull Normal Tenacity
Dull Normal Tenacity
Bright Normal Tenacity
Semi-Dull High Tenacity
Tubes are invoiced as a separate item at \$.70 or \$.80 each and are turnship for spedif. returnable for credit.
\* Trademark for du Pont's polyester fiber

#### NON CELLULOSIC STAPLE & TOW ACRYLIC

#### The Chemstrand Corp.

Current Prices

sippi River

| "Acrilan"   |        |
|---|--------|
| 2.0 denier Semi-dull staple and tow                         | \$1.18 |
| 2.5 denier Hi-Bulk Bright and Semi-dull staple and tow      | 1.12   |
| 3.0 denier Bright & Semi-dull staple and tow                | 1.12   |
| 5.0 denier Bright & Semi-dull staple and tow                | 1.12   |
| 8.0 denier Bright and Semi-dull staple and tow              |        |
| Hi-Bulk staple Semi-dull                                    | 1.12   |
| Terms: Net 30 days. Freight prepaid to points east of the M | issis- |

#### Carbide and Carbon Chemicals Co.

Div. Union Carbide and Carbon Corp. Textile Fibers Dept.

Effective November 1, 1955

#### Dynel Staple

| Natural Dynel                                   |           |        |     |     |
|---|-----------|--------|-----|-----|
| 3, 6, 12, and 24 Denier, Staple and Tow         |           | \$1.05 | per | lb. |
| Whitened Dynel, and Dynel Spun with Light       |           |        |     |     |
| Colors: Blonde, or Gray                         |           |        |     |     |
| 3 and 6 Denier, Staple and Tow                  |           | 1.20   | per | lb. |
| Dynel Spun with Dark Colors: Black, Charcoal, a | and Brown |        |     |     |
| 3 and 6 Denier, Staple and Tow                  |           | 1.30   | per | lb. |
| Prices are quoted f.o.b. South Charleston, W.   |           |        |     |     |

#### E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

**Current Prices** 

#### "Orlon" Acrylic Staple & Tow

| Denier                               |                                    | Price   |
|--------------------------------------|------------------------------------|---|
| 3.0 De<br>3.0 De<br>4.5 De<br>6.0 De | nier                               | 1st Grade<br>\$1.30<br>1.25<br>1.60<br>1.20<br>1.20 |
| Etan                                 | o I ometho 11/4 01/ 01/4 01/ 41/11 |   |

Staple Lengths—1½", 2", 2½", 3", 4½".

High Shrinkage Staple same price as Regular Staple.

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#### NYLON

#### American Enka Corp.

#### Nylenka (Nylon Six Staple)

| Denier<br>3 | Luster<br>semi-dull | Length (Inches) 1 1/8, 1 1/2, 2, | Price<br>per pound<br>\$1.25 |
|-------------|---------------------|----------------------------------|------------------------------|
| 6           | bright<br>bright    | 2 %, 3, 4 ½<br>3, 4 ½<br>2 %     | 1.25<br>1.20                 |
| 10<br>15    | bright<br>bright    | 3                                | 1.20                         |

Deniers and lengths of staple not listed above are available upon

special request.

Terms: Net 30 days. Minimum common carrier transportation charges will be prepaid and absorbed to the first destination on or east of the Mississippi River. In prepaying transportation charges, seller reserves the right to select the carrier used.

#### E. I. du Pont de Nemours & Co.

Textile Fibers Dept. Current Prices

#### Nylon Staple and Tow

| Denier | Length                         | Type*   | Price/Lb. |
|--------|--------------------------------|---------|-----------|
| 1.5    | 1 1/4"-1 1/2"-2"-2 1/2"-4 1/2" | 100/200 | \$1.30    |
| 1.5    | 11/4"-11/2"-2"-21/2"-41/2"     | 101/201 | 1.32      |
| 3.0    | 11/4"-11/4"-2"-21/4"-3"-41/4"  | 100/200 | 1.25      |
| 3.0    | 11/4"-11/2"-2"-21/2"-3"-41/2"  | 101/201 | 1.27      |
| 6.0    | 11/4"-11/4"-2"-21/4"-3"-41/4"  | 100/200 | 1.25      |
| 6.0    | 11/8"-11/3"-2"-21/2"-3"-41/2"  | 101/201 | 1.27      |
| 15.0   | 11/2"-3"-41/2"-61/2"           | 100     | 1.20      |
| 15.0   | 1 1/2 "-3"-4 1/2"-6 1/2"       | 101     | 1.22      |

Tow price same as Staple for:

1.5 denier type 200 in 330,000 total denier

1.5 denier type 201 in 350,000 total denier

3.0 denier type 100/200 in 430,000 total denier

3.0 denier type 101/201 in 455,000 total denier

6.0 denier type 100 in 330,000 total denier 6.0 denier type 101 in 345,000 total denier

15.0 denier type 100 in 330,000 total denier

15.0 denier type 101 in 350,000 total denier

These prices are subject to change without notice.

Trems: Net 30 Days.

Terms: Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

#### Types

\* Type is used to describe luster, tenacity, not crimpset, or crimpset. Type 100 Bright, normal tenacity, not crimpset.

Type 101 Bright, normal tenacity, crimpset.

Type 200 Semi-dull, normal tenacity, not crimpset.

Type 201 Semi-dull, normal tenacity, crimpset.

#### Industrial Rayon Corp.

Effective April 9, 1956

#### Nylon Staple

| 1.5 denier           |                   |    | \$1.30 per lb. |
|----------------------|-------------------|----|----------------|
|                      |                   |    | 1.25 per lb.   |
| 8 and 15 denier      |                   |    | 1.20 per lb.   |
| Bright and semi-dull | , required length | 1, |                |

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges al-lowed at lowest published rate to all points east of the Mississippi

#### POLYESTER

#### E. I. du Pont de Nemours & Co.

Textile Fibers Dept. Current Prices

#### "Dacron" Staple and Tow

| Den. | Luster    | Туре | Staple Length | Tow<br>Bundle | 1st Gr. |
|------|-----------|------|---------------|---------------|---------|
| 1.5  | Semi-Dull | 54   | 11/4"-41/2"   | 385M          | \$1.40  |
| 3.0  | Semi-Dull | 54   | 11/4"-41/2"   | 385M          | 1.35    |
| 4.5  | Semi-Dull | 54   | 11/4"-41/2"   | 385M          | 1.35    |
| 6.0  | Semi-Dull | 54   | 11/4"-41/2"   | 385M          | 1.35    |

Terms: Net 30 Days.

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#### POLYVINYL ACETATE

#### American Viscose Corp.

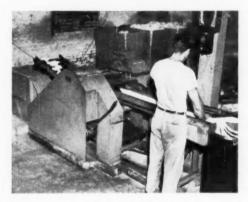
Effective October 1, 1950

#### Vinyon Staple

| 3.0 denier 1/2" unopened    | \$.80 per lb. |
|-----------------------------|---------------|
| 3.0 denier 11/4", 2" opened | .90 per lb.   |
| 5.5 denier 1", 31/2" opened | .90 per lb.   |

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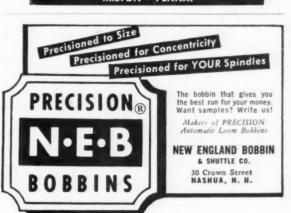
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#### Charlotte Fibre Co.

Exclusive Agents for Snia Viscosa Italy "Merinova" Effective January 1, 1954

#### Merinova Staple

| Tries miora orapio   |
|--|
| 3 Denier 1-9/16", 2-1/2" and 3" \$.8   |
| 5 Denier 1-1/16", 1-9/16", 2-½", 4" and 6"   |
| 9 Denier 4" .8   |
| 18 Denier 6", 2-1/2"   |
| 60 Denier 14"  |
| Other lengths or deniers can be produced as requested. Solution-dyed Merinova staple fiber.                  |
| Light colors   |
| Medium colors  |
| Dark colors 1.00 per lb.   |
| French Combed Tops 1.10  |
| Terms: Net 30 days. All prices are duty paid, landed free, freigh prepaid to rail point nearest destination. |

#### Virginia-Carolina Chemical Corp.

Fiber Division

Effective January 15, 1951

#### "Vicara" Staple

|          | Standard<br>Crimp | Highly<br>Crimped |
|----------|-------------------|-------------------|
| 3 Denier | \$1.00 per lb.    | \$1.05 per lb.    |
| 5 Denier | 1.00 per lb.      | 1.05 per lb.      |
| 7 Denier | 1.00 per lb.      | 1.05 per lb.      |

#### Bleached "Vicara" Staple

|          | Standard<br>Crimp | Highly<br>Crimped |
|----------|-------------------|-------------------|
| 3 Denier | \$1.10 per lb.    | \$1.15 per lb.    |
|          | 1.10 per lb.      | 1.15 per lb.      |
| 7 Denier | 1.10 per lb.      | 1.15 per lb.      |

Staple length ½ to 6 in.
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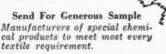
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\*U. S. Patent 2,625,343

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#### Calendar of Coming Events

Sep. 6-7—The Fiber Society Fall meeting, Warwick Hotel, New York, N. Y.
Sep. 10-15—Perkin Centennial, Waldorf Astoria, New York, N. Y.
Sep. 11—Synthetic Organic Chemical Manufacturers Association meeting, Hotel Roosevelt, New York, N. Y.
Sep. 11-20—International Autumn Fair, Utrecht, Holland.
Sep. 12—AATT monthly meeting, Vanderbilt Hotel, New York, N. Y.
Sep. 13-15—AATCC National Convention, Waldorf Astoria, New York, N. Y.
Sep. 16-22—ASTM Pacific Coast meeting, Hotel Statler, Los Angeles, Calif.
Sep. 17-21—Instrument Society of America conference and exhibit, Coliseum, New York, N. Y.
Sep. 26-28—Lowell Technological Institute Perkin Centennial observance and open house, Lowell, Mass.

Sep. 27-28—Textile Quality Control Association Fall meeting. Sedgefield Inn, Greensboro, N. C.
Sep. 27-28—Mational Association of Cotton Manufacturers annual meeting, Portsmouth, N. H.
Sep. 27-28—Northern Textile Association, annual meeting, Portsmouth, N. H.
Oct. 1-5—Southern Textile Exposition, Textile Hall, Greenville, S. C.
Oct. 3-AATT monthly meeting, Vanderbilt Hotel, New York, N. Y.
Oct. 3-4—National Cotton Council Chemical Finishing Conference, Hotel Statler, Washington, D. C.
Oct. 16-19—ASTM Fall meeting, Hotel Warwick, New York, N. Y.
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